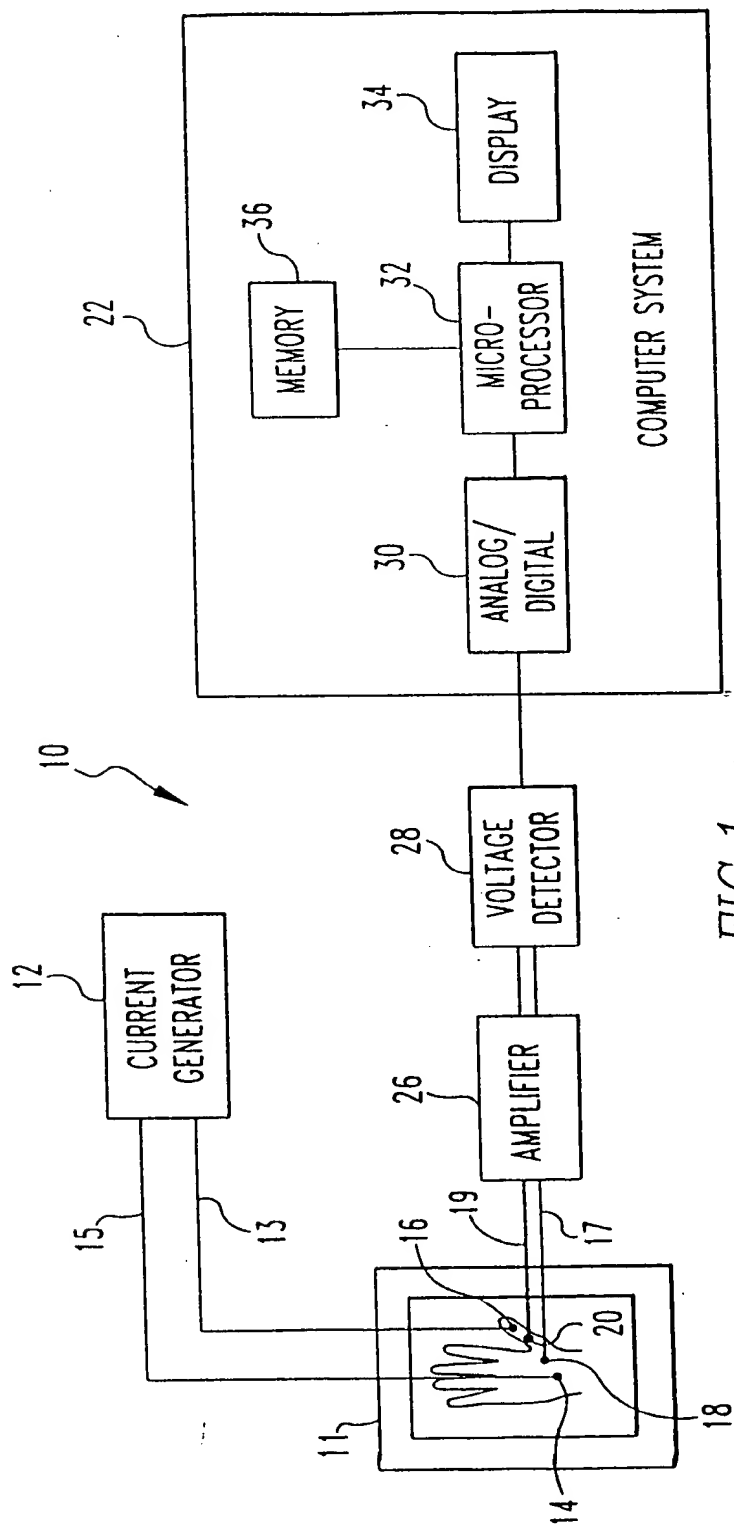


METHOD AND SYSTEM FOR BIOMETRIC RECOGNITION BASED ON ELECTRIC AND OR MAGNETIC CHARACTERISTICS

Juliana H. J. Brooks Serial No.: 09/396,112 Docket No. 35007

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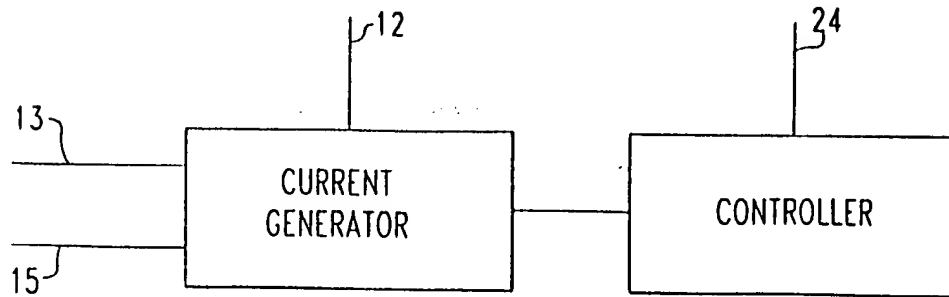


FIG. 2

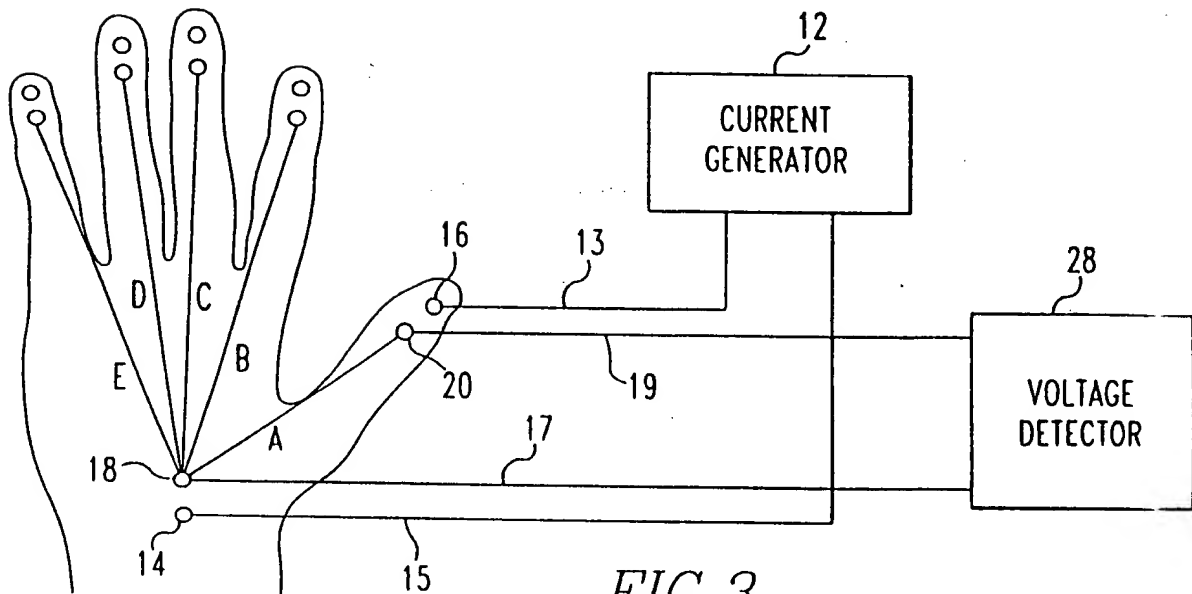


FIG. 3

3\140

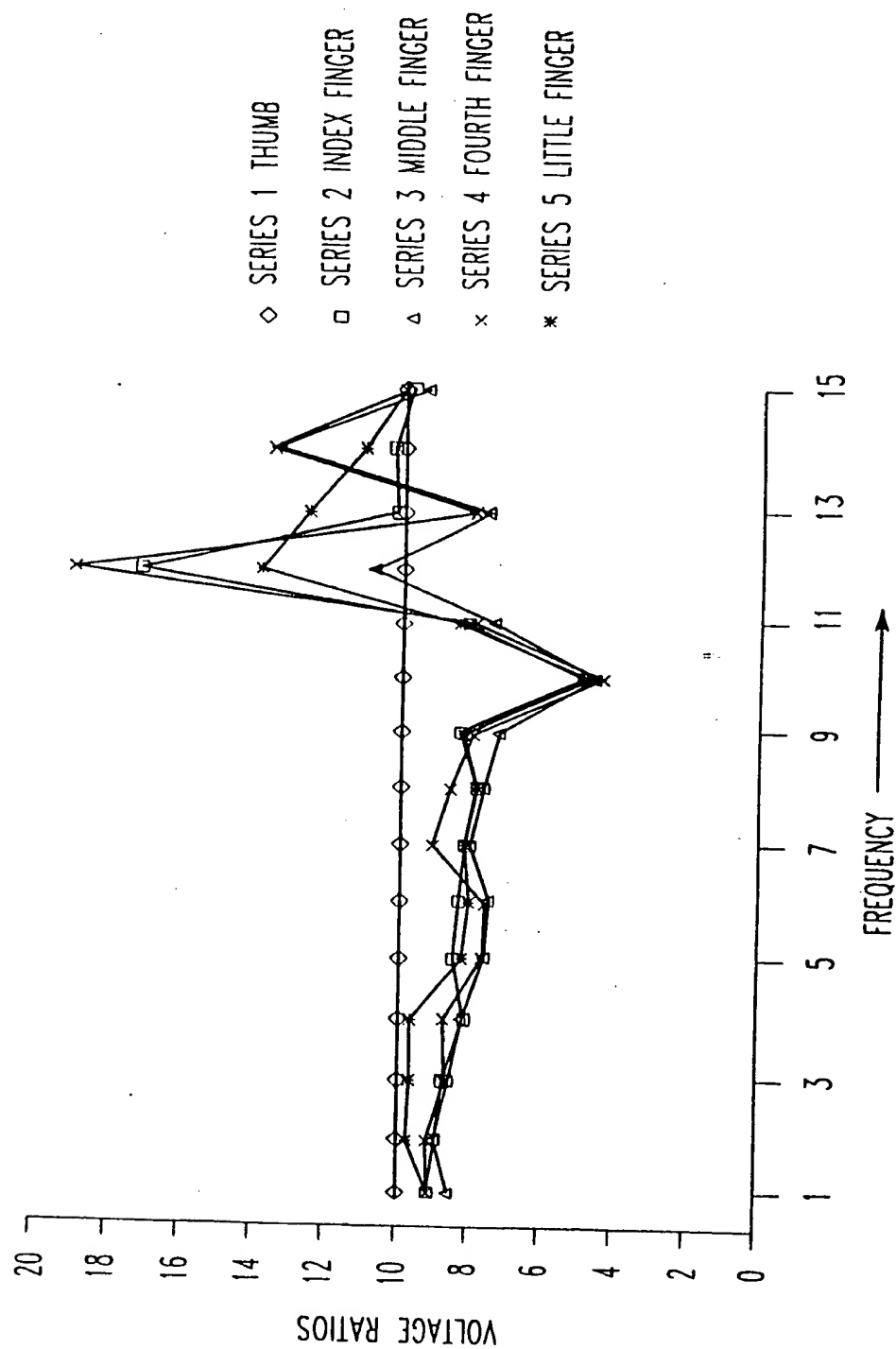


FIG. 4

4\140

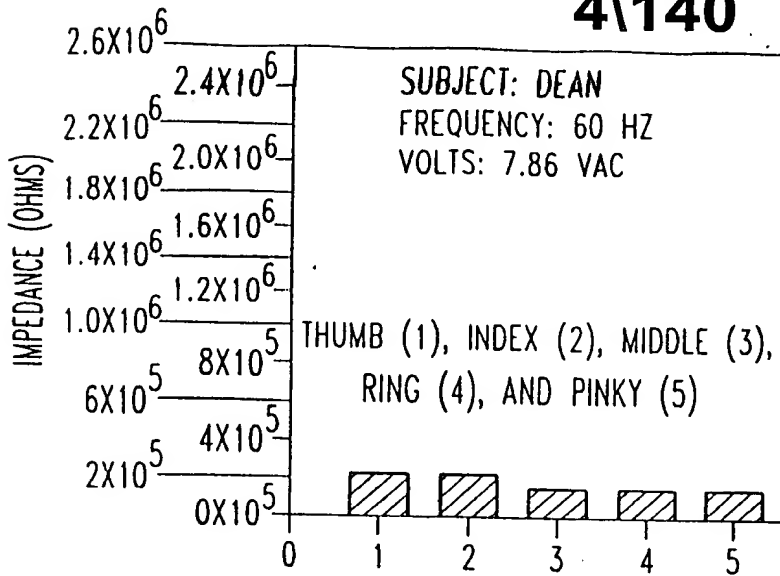


FIG. 5A

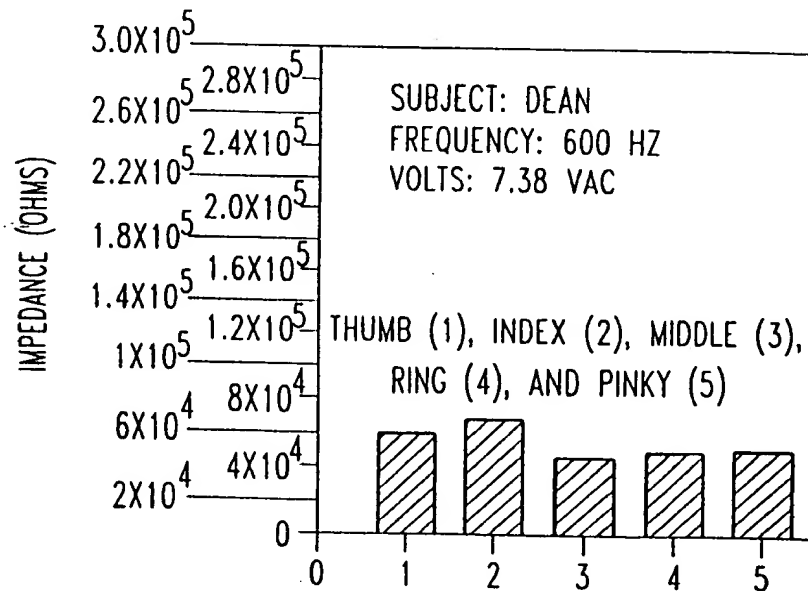


FIG. 5B

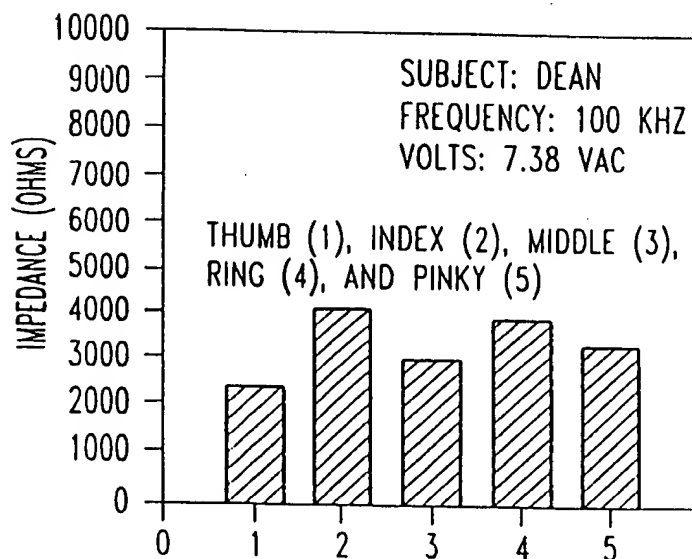
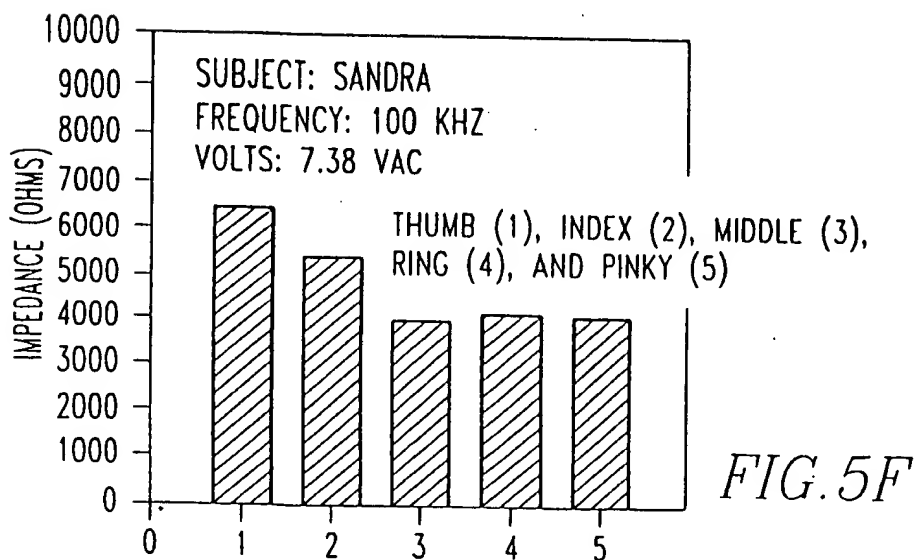
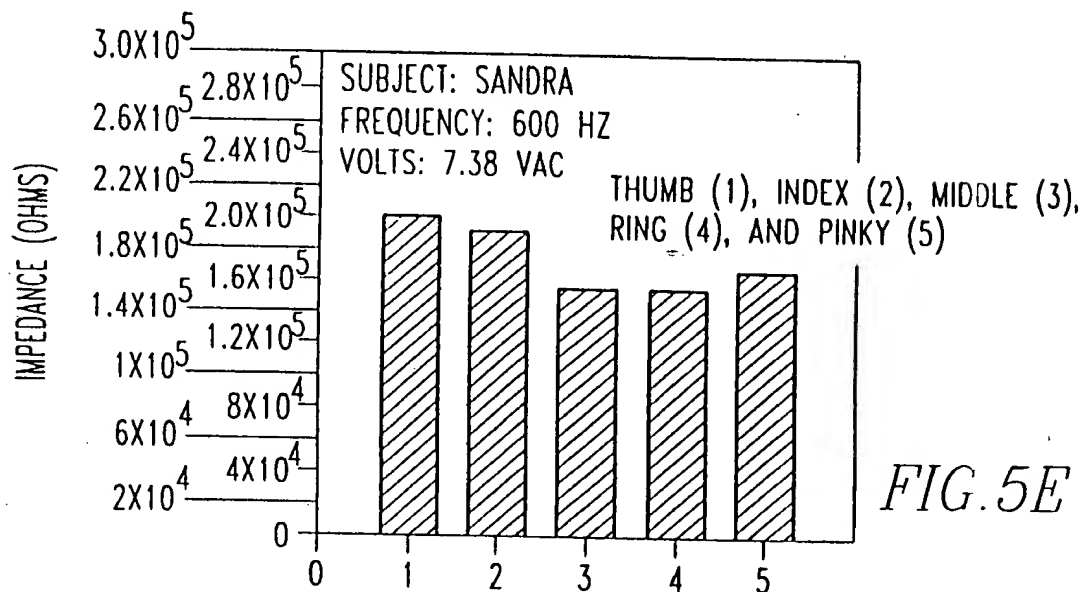
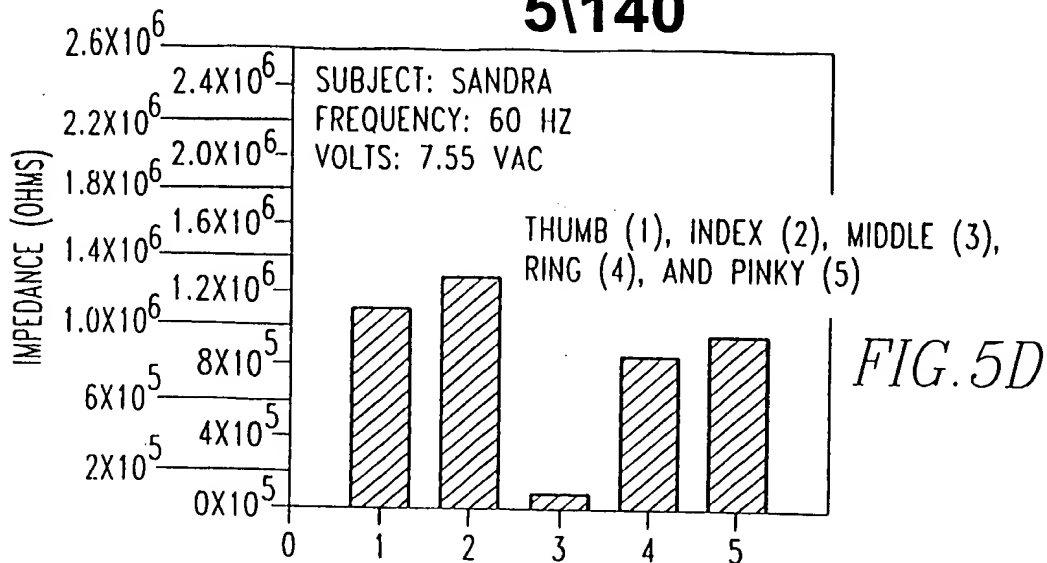


FIG. 5C

5\140



6\140

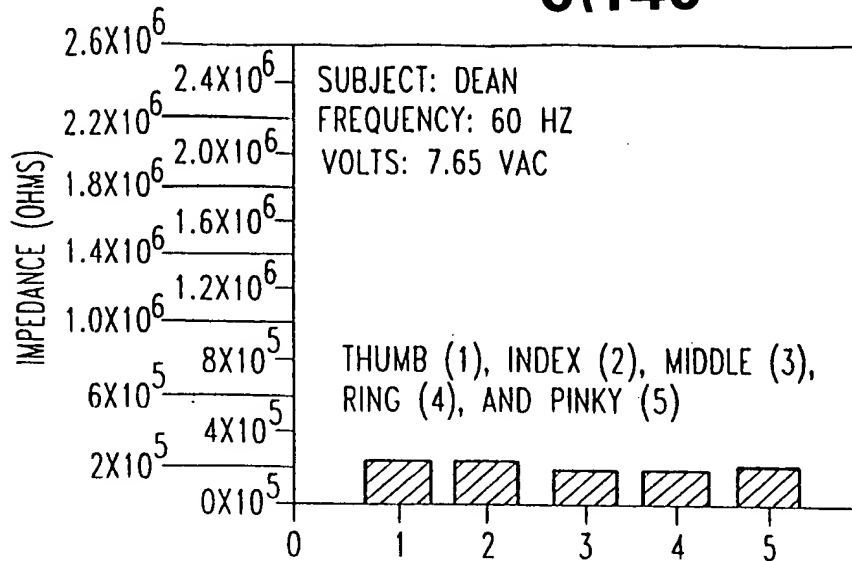


FIG. 6A

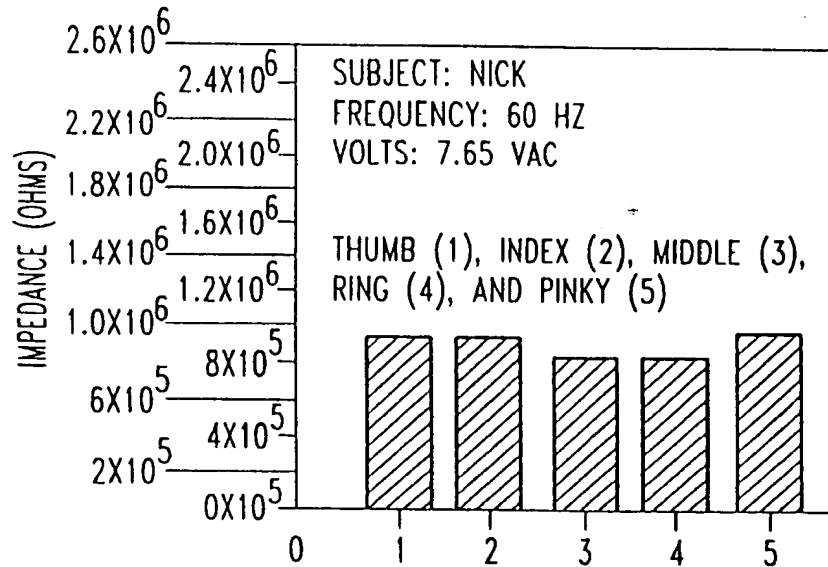


FIG. 6B

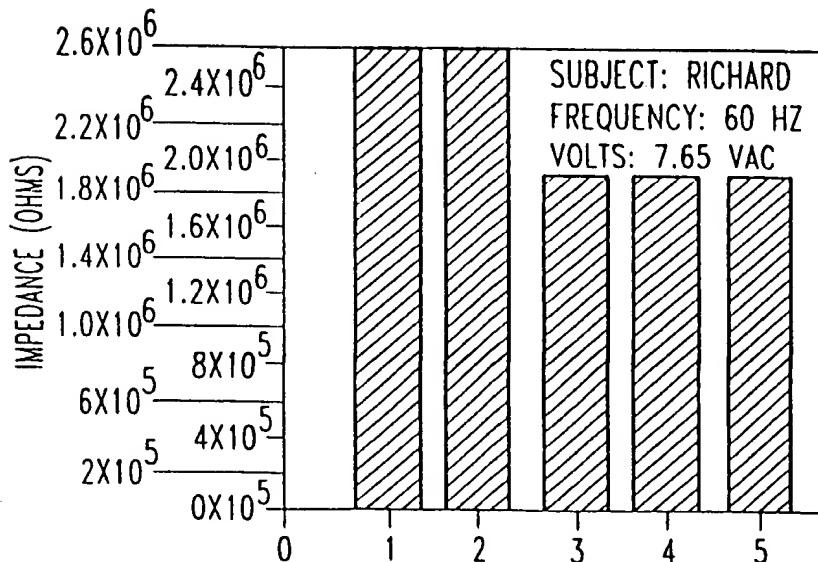


FIG. 6C

THUMB (1), INDEX (2), MIDDLE (3),
RING (4), AND PINKY (5)

7\140

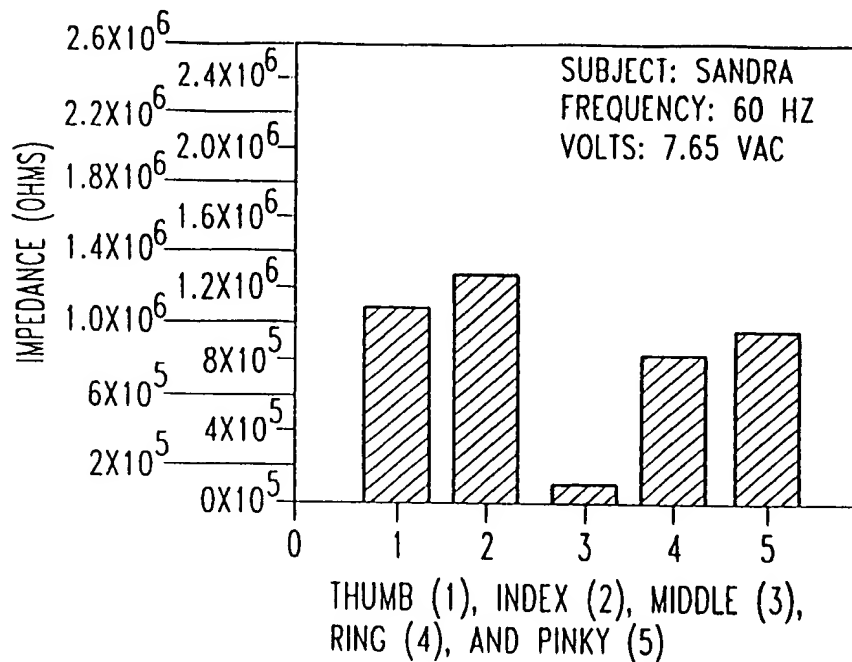


FIG. 6D

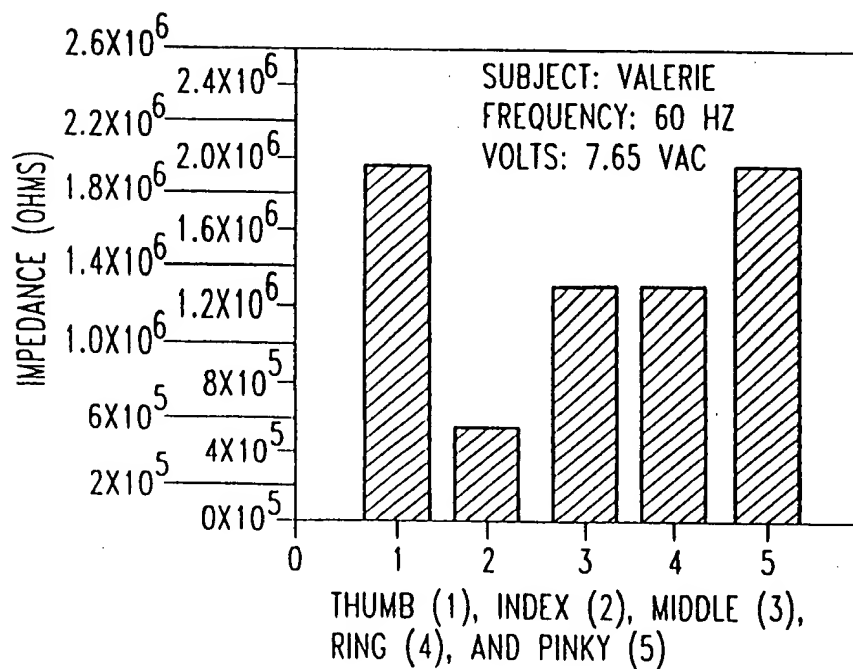
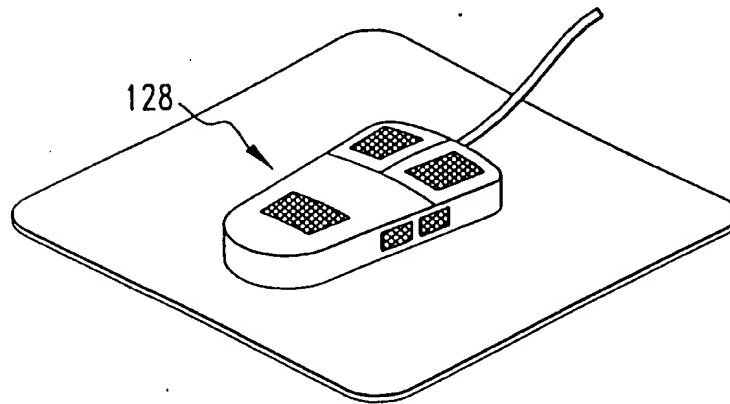
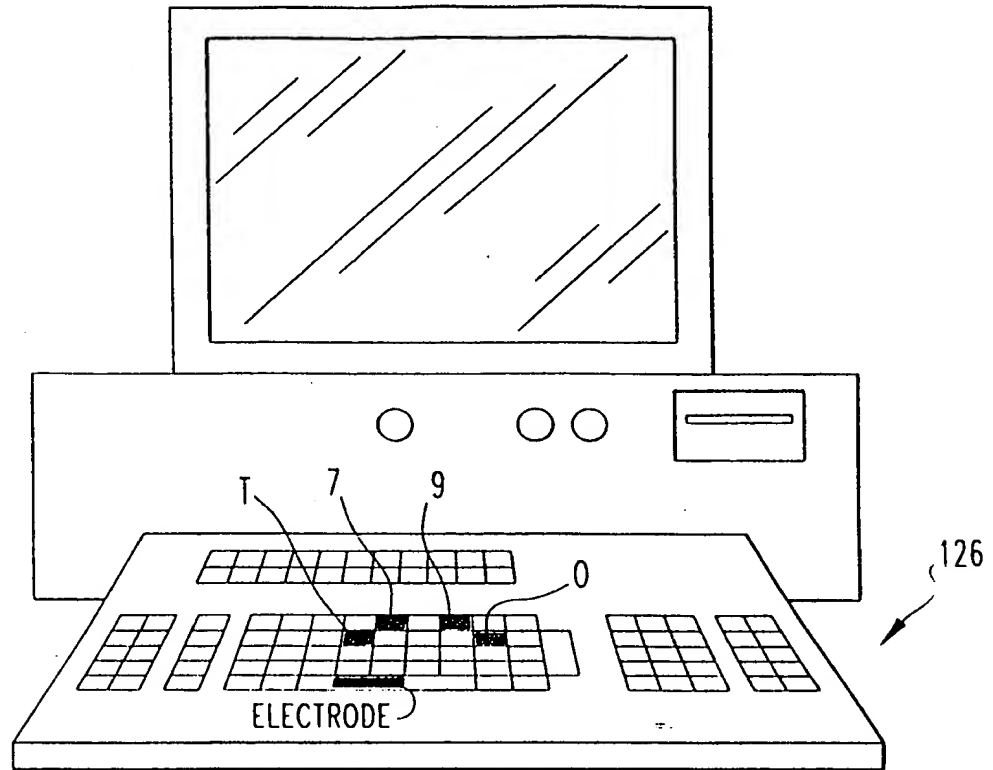


FIG. 6E

8\140



9\140

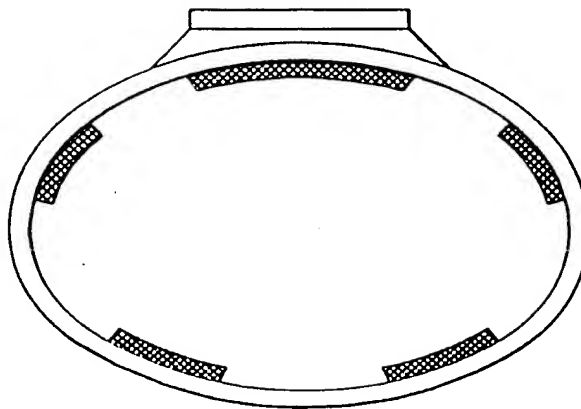
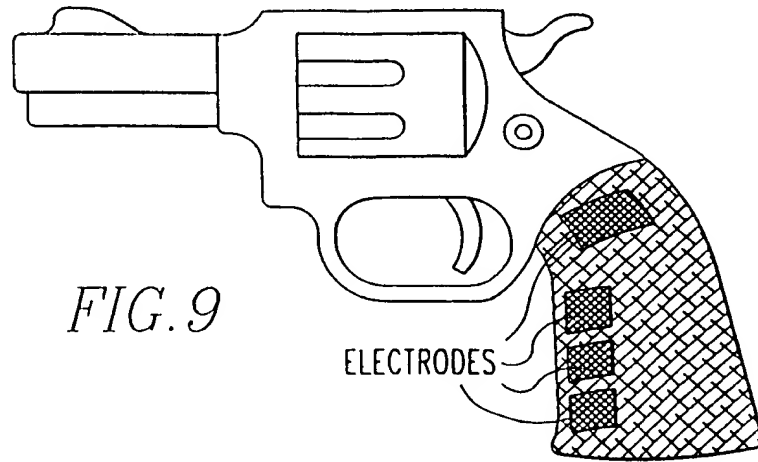


FIG10

10\140

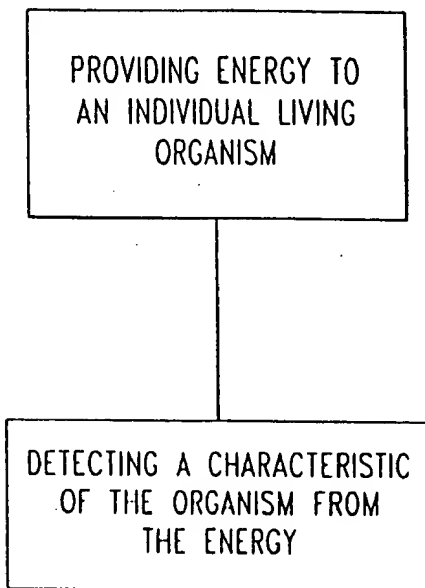


FIG.11

11\140

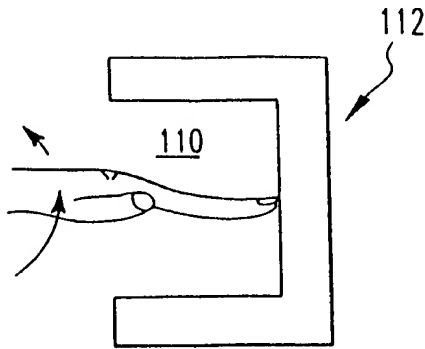


FIG. 12a

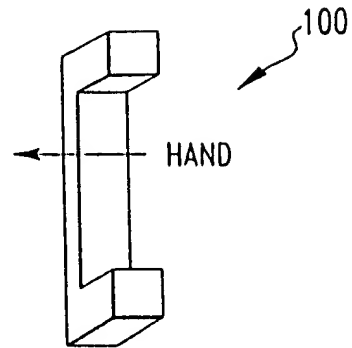
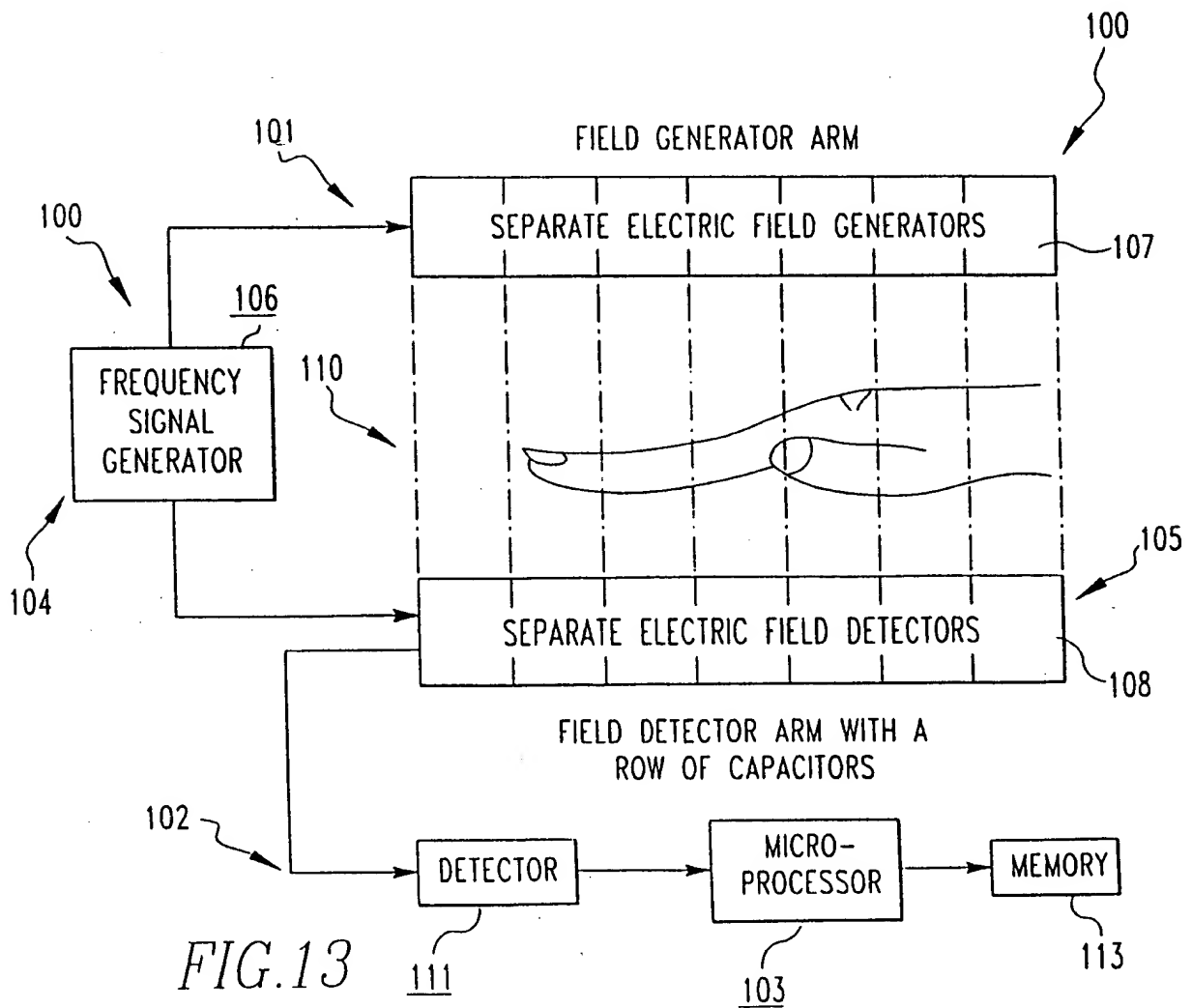
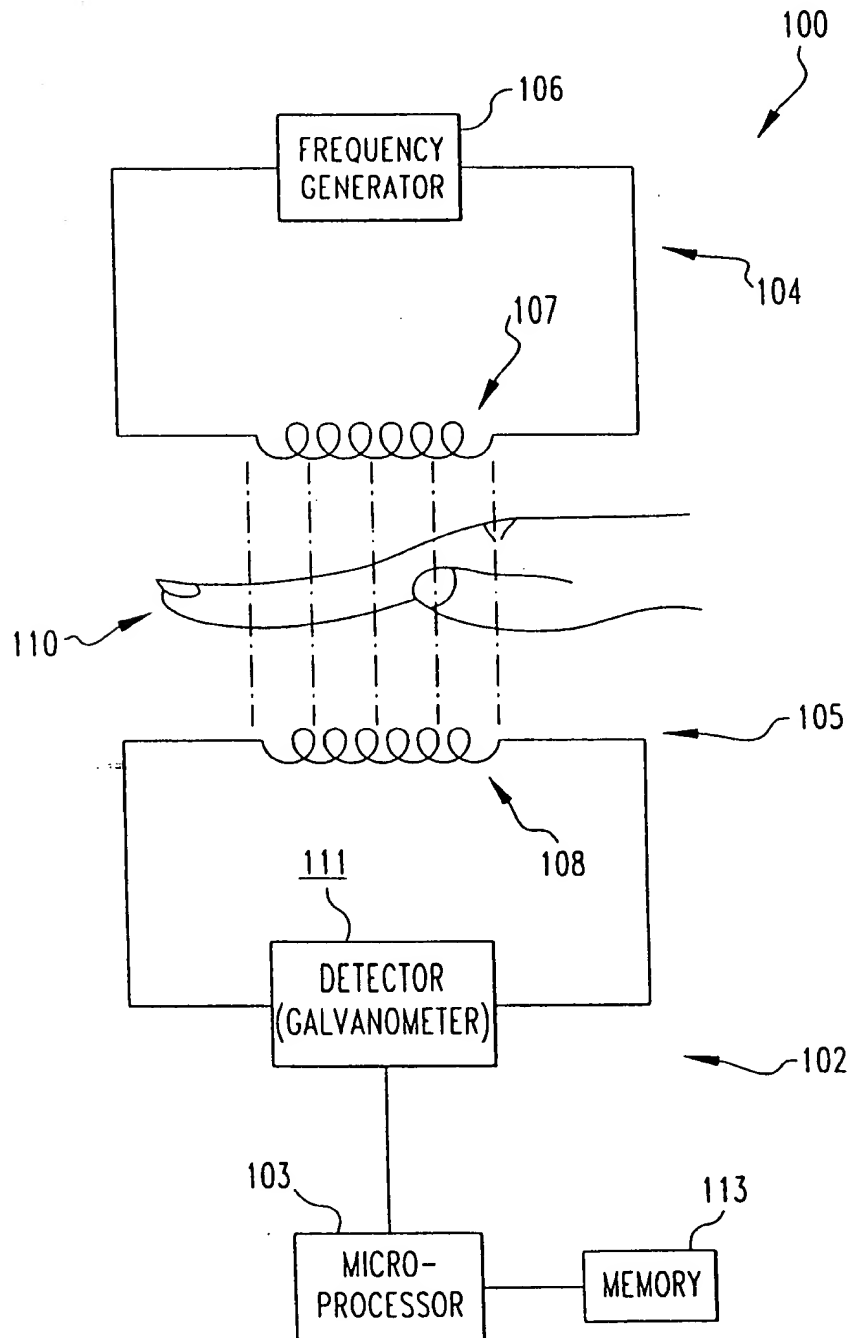


FIG. 12b



12\140



DETECTOR CAN BE A PHASE SENSITIVE DETECTOR

FIG.14

13\140

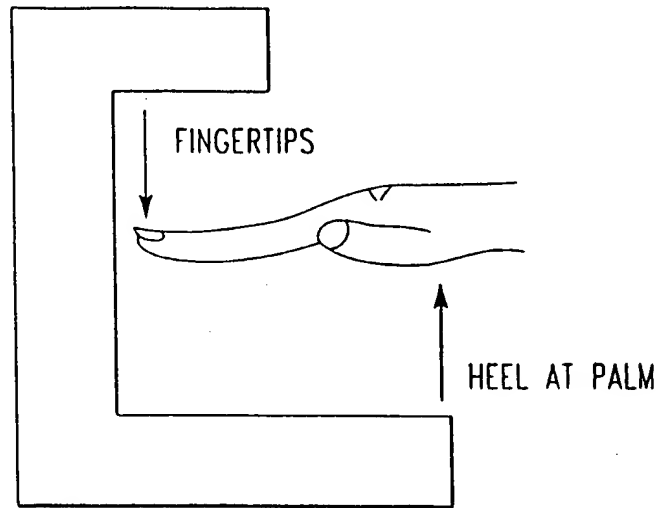


FIG.15

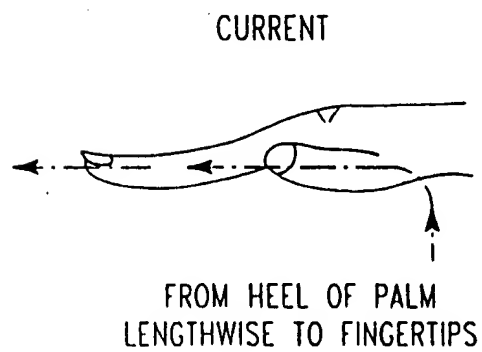


FIG.16

14\140

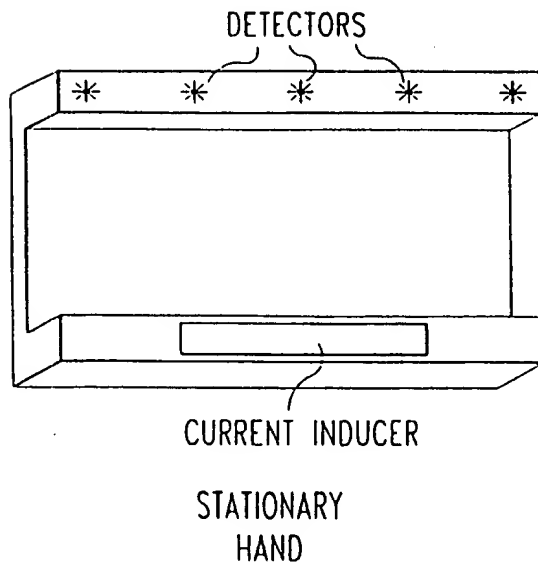


FIG. 17a

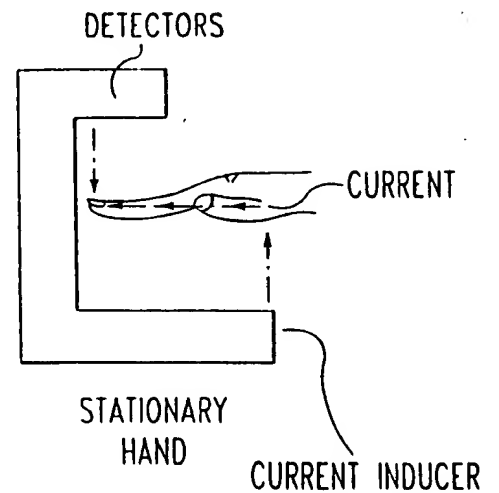


FIG. 17b

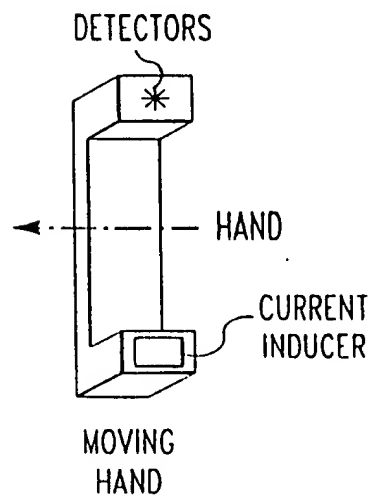


FIG. 18a

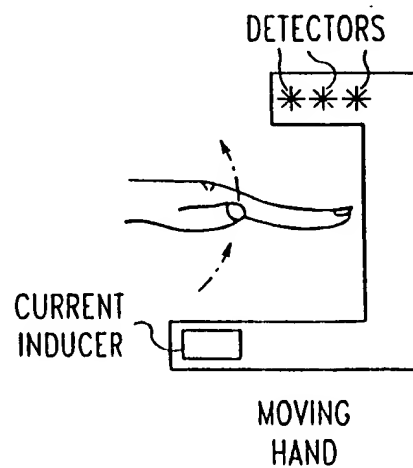
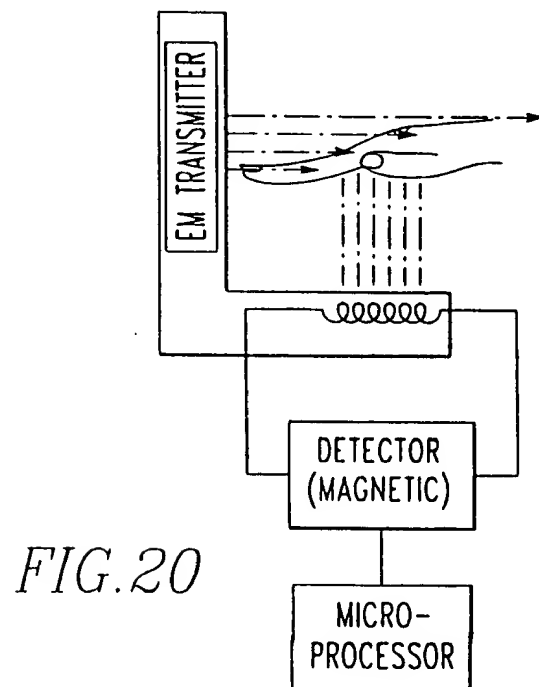
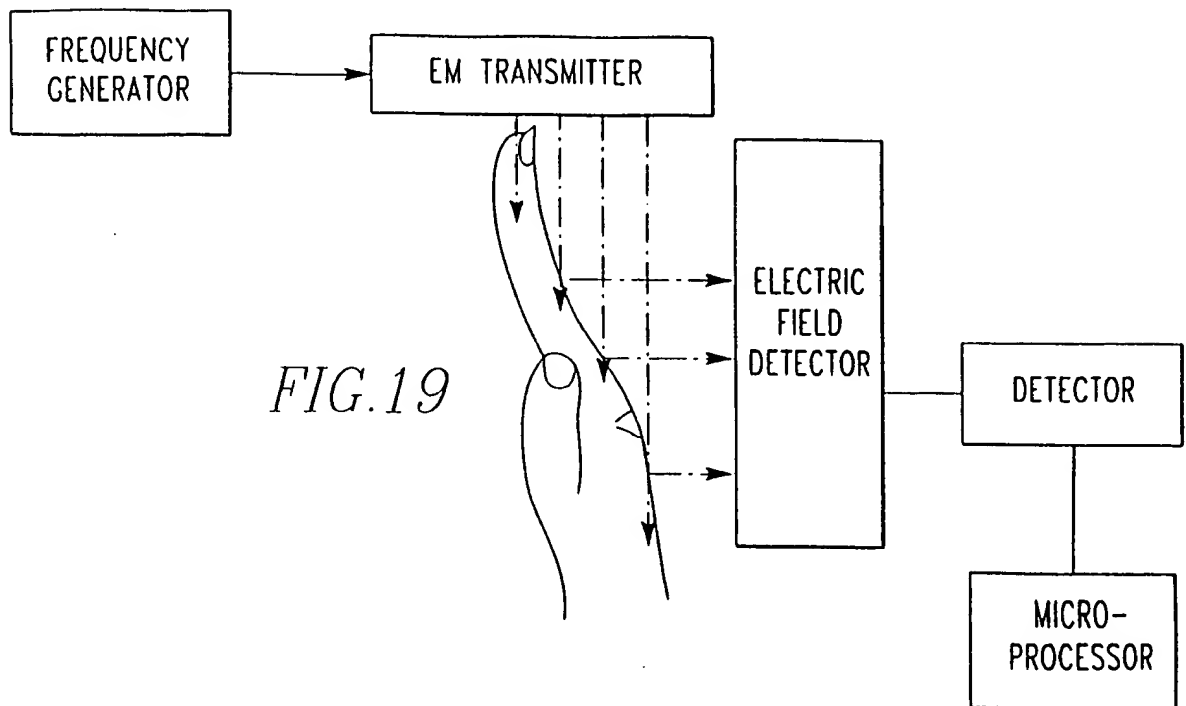


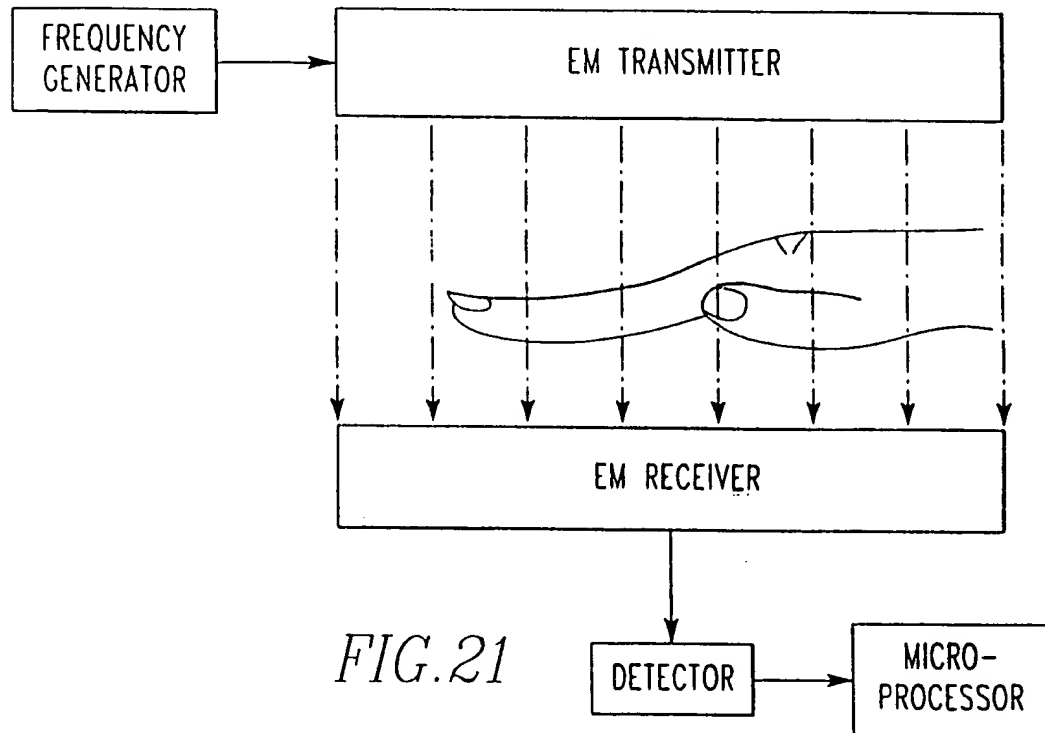
FIG. 18b

15\140

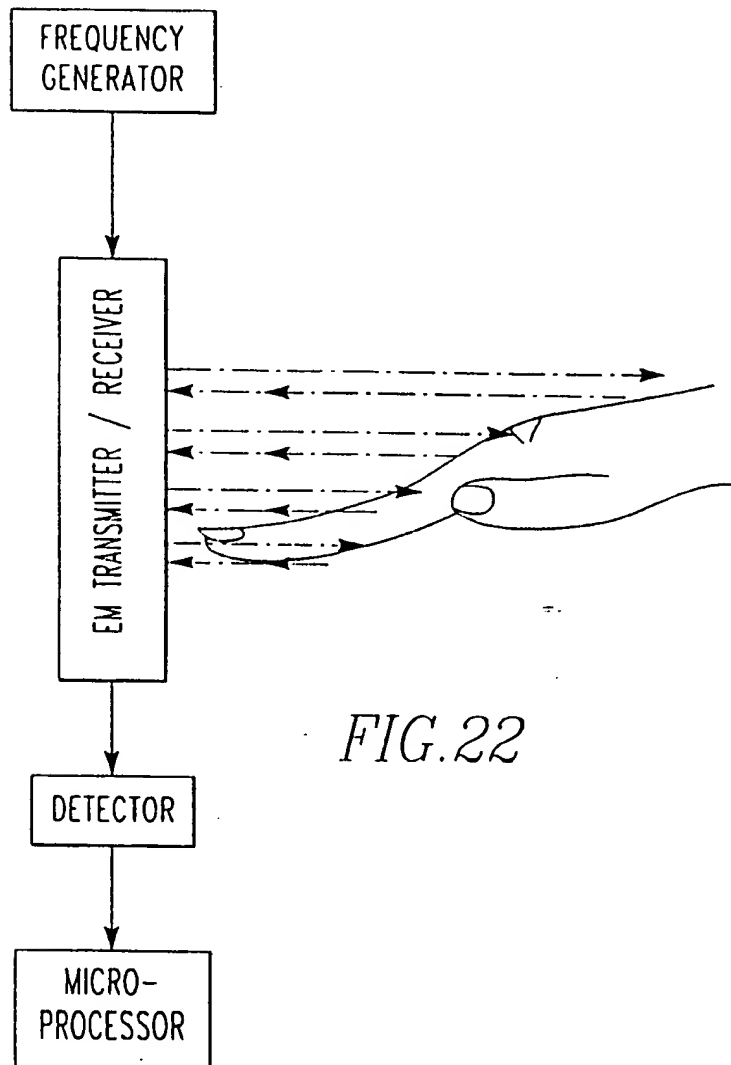


16\140

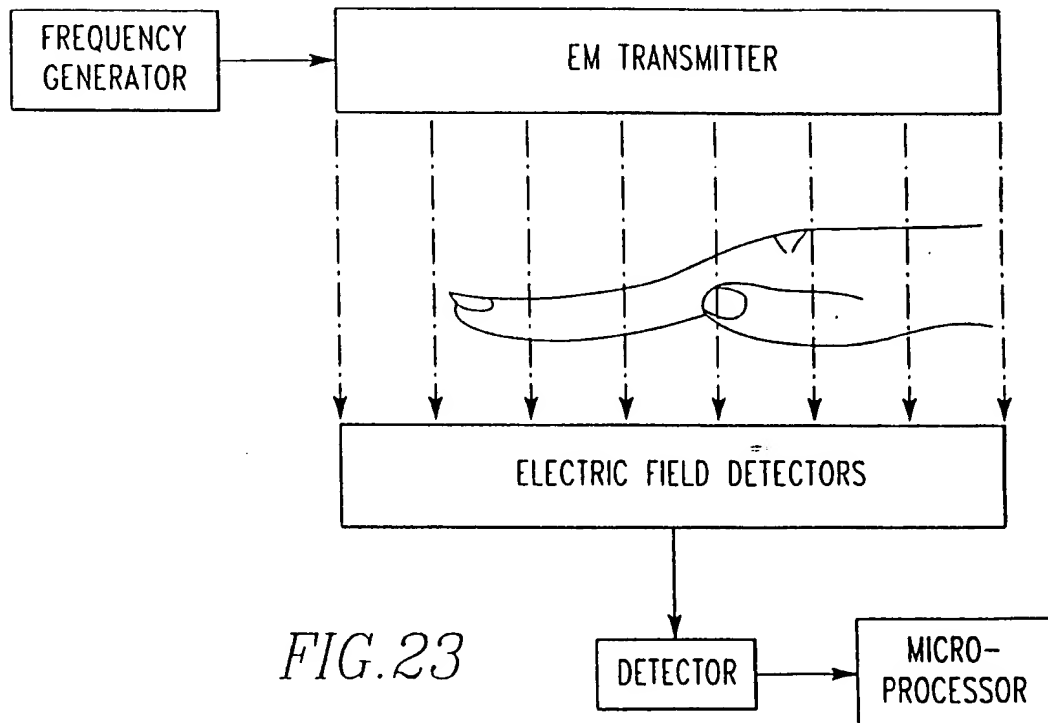
DETECTOR CAN MEASURE PHASE, AMPLITUDE, FREQUENCY, WAVE FORM, ETC.



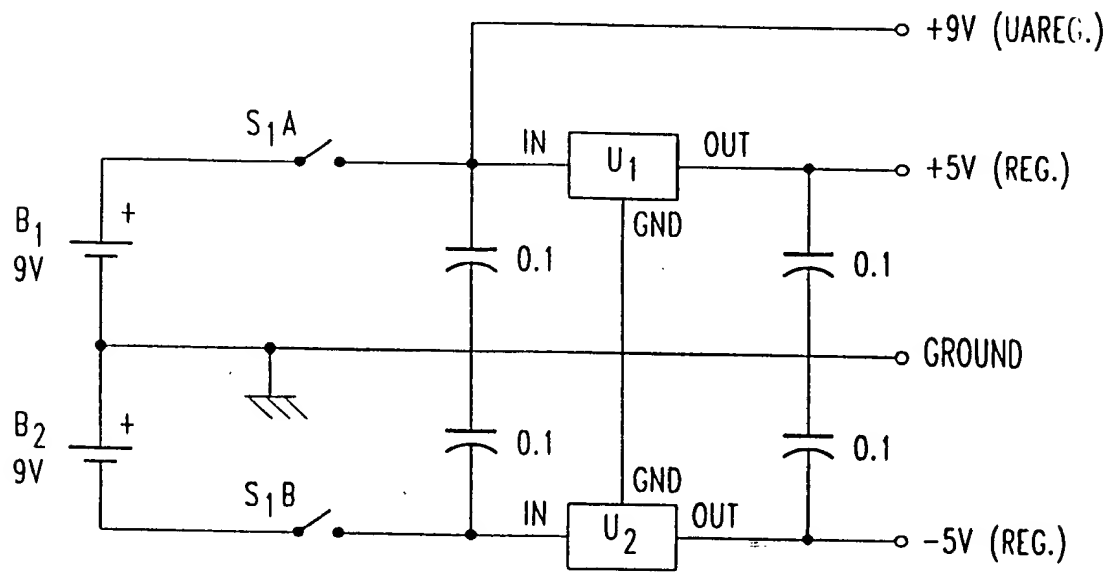
17\140



18\140



19\140



$U_1 = 78\text{LOSACL P}$

POSITIVE 5 VOLT REGULATOR

$U_2 = 79\text{LOSCL P}$

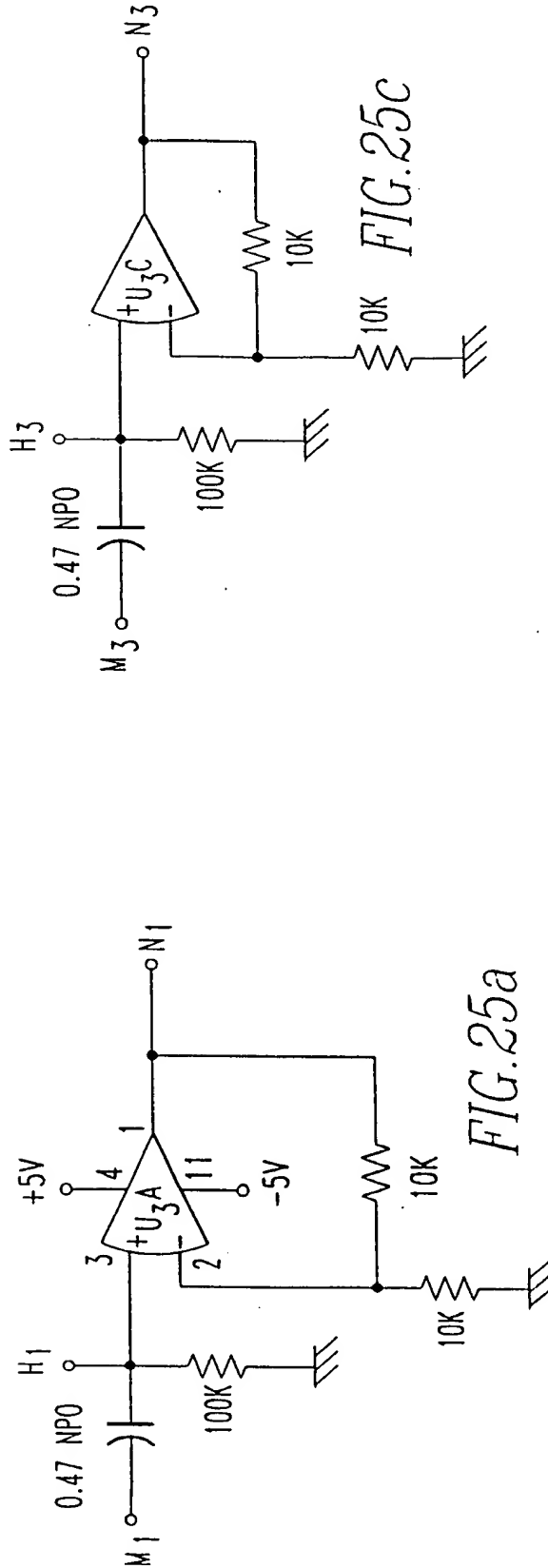
NEGATIVE 5 VOLT REGULATOR

$S_1 = \text{DPST}$

POWER SUPPLY REGULATORS

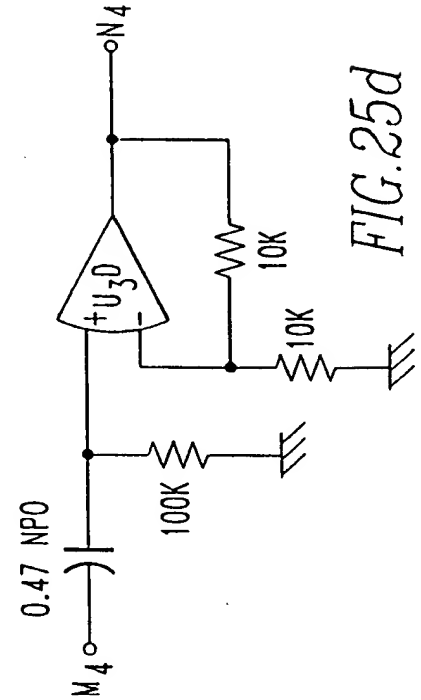
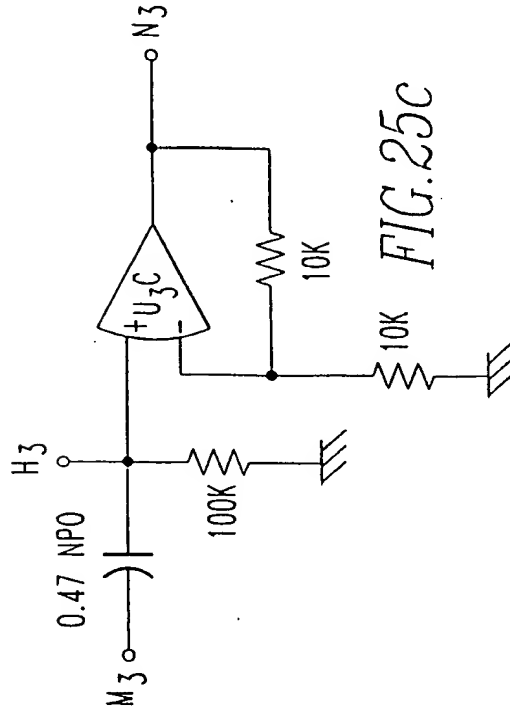
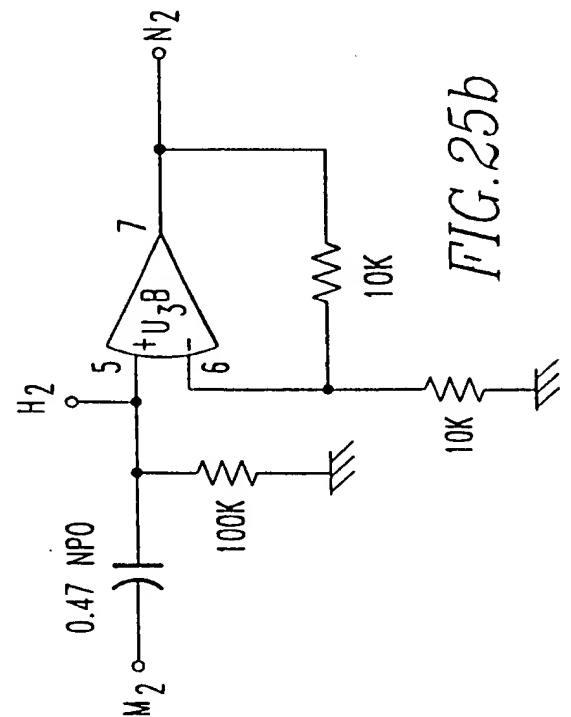
FIG.24

20\140

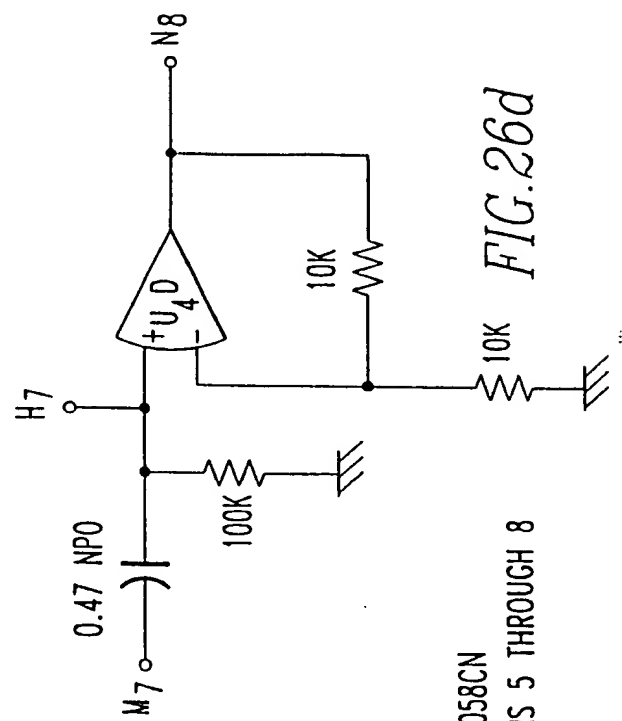
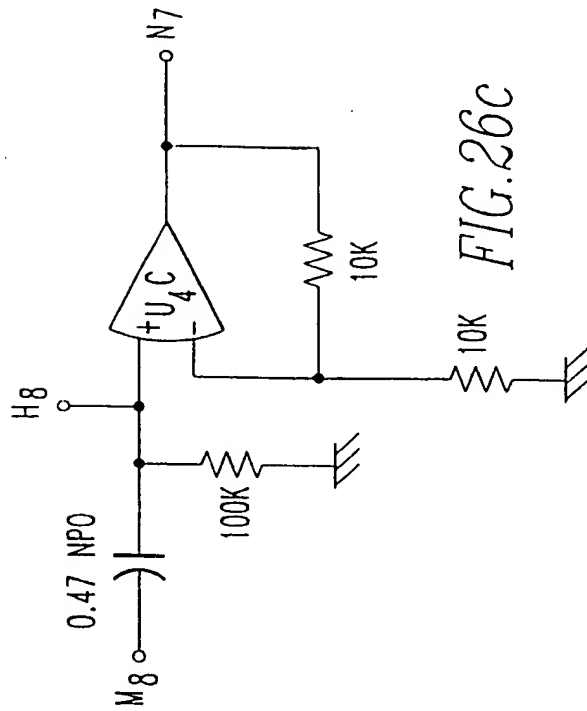
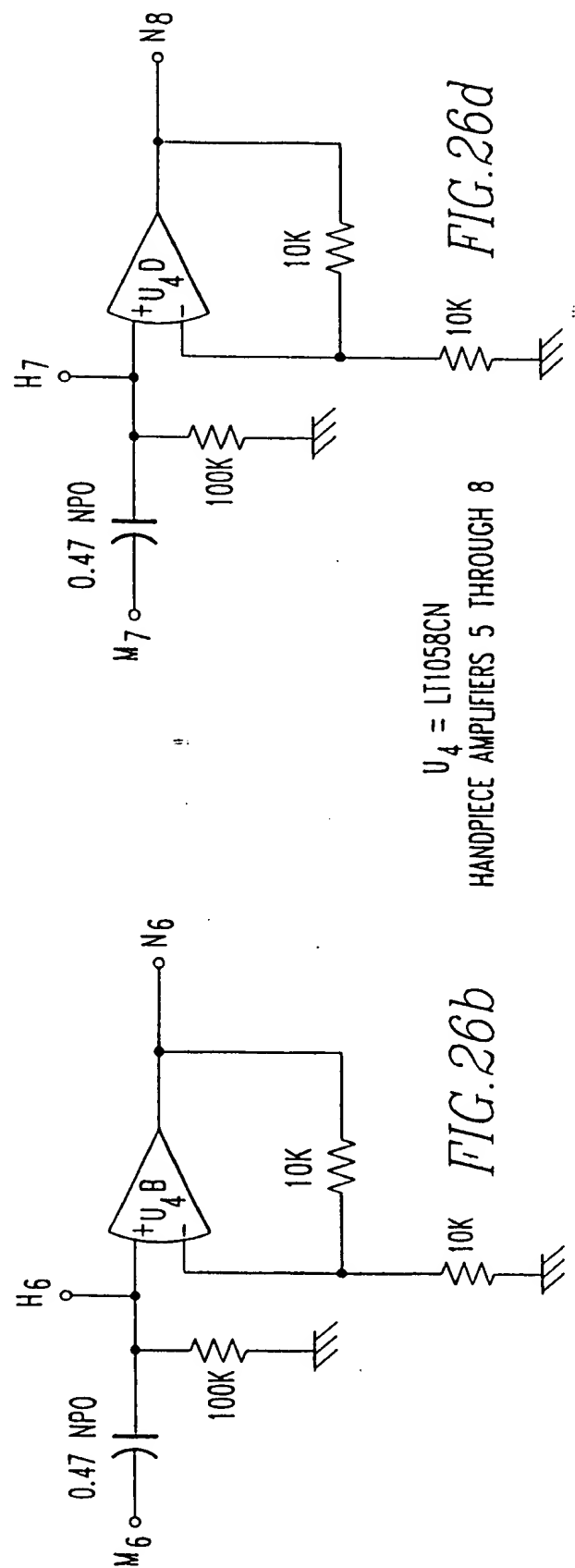
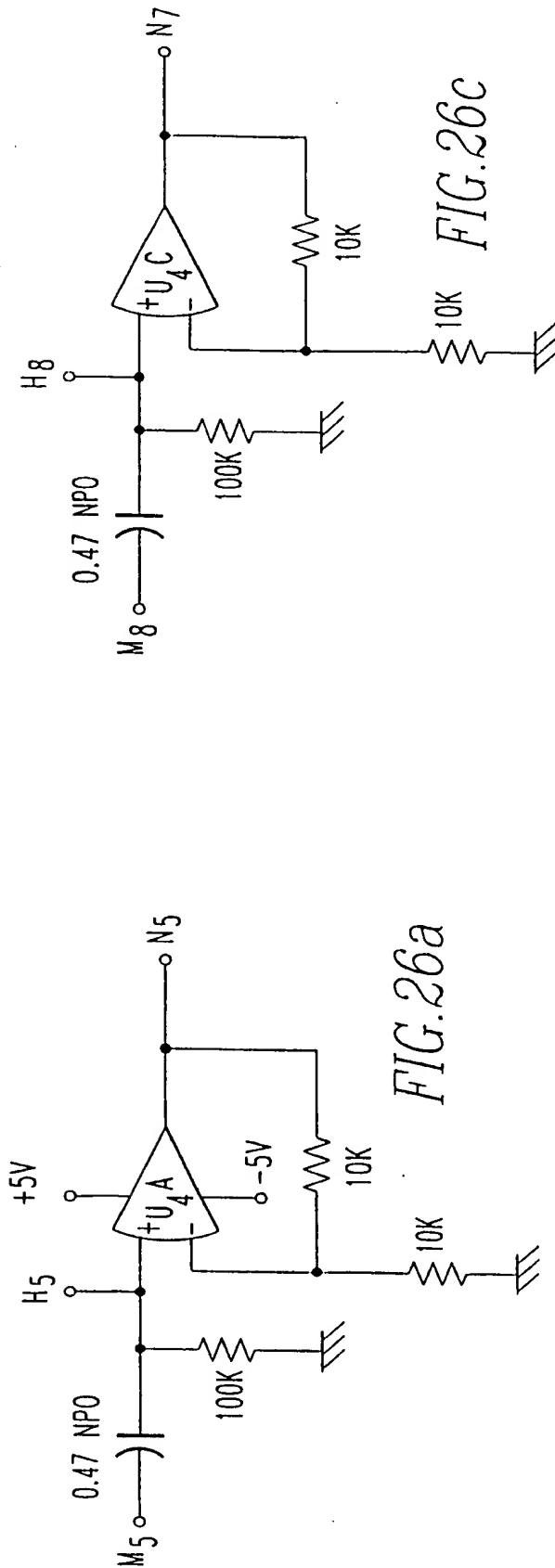


$U_3 = \text{LT1058CN}$

HANDPIECE AMPLIFIER 1 THROUGH 4



21\140



$U_4 = \text{LT1058CN}$
HANDPIECE AMPLIFIERS 5 THROUGH 8

22\140

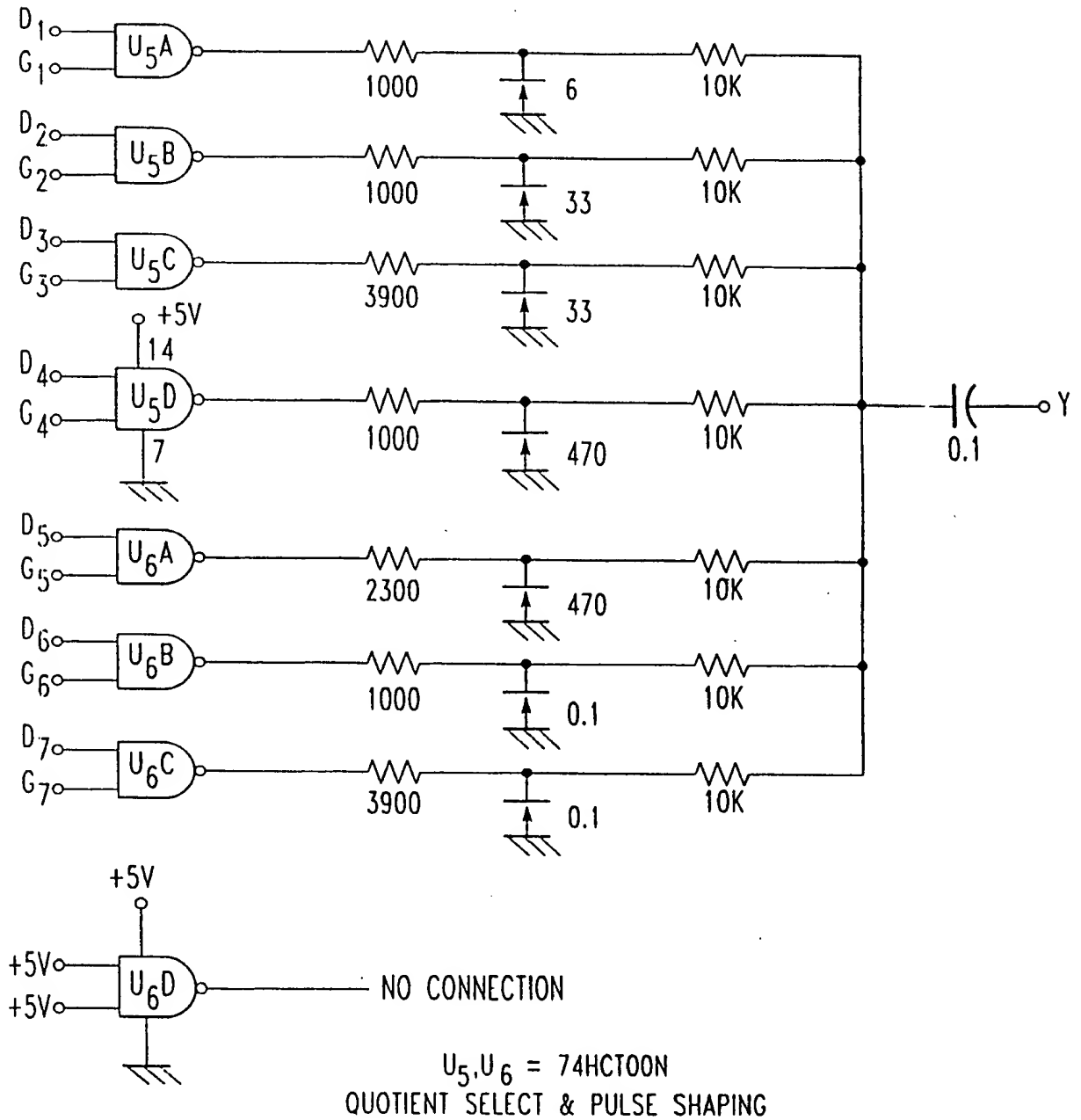


FIG. 27

23\140

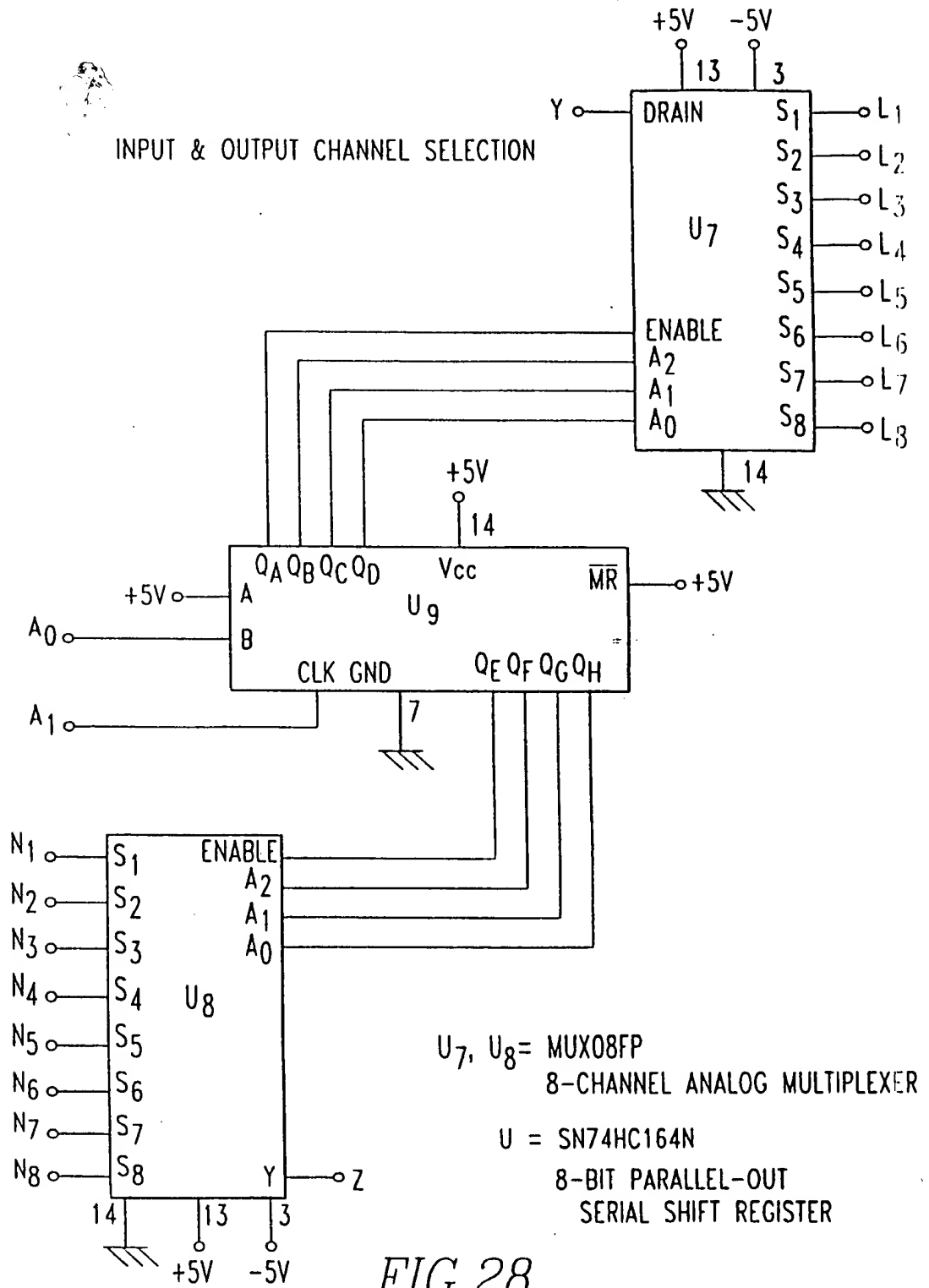
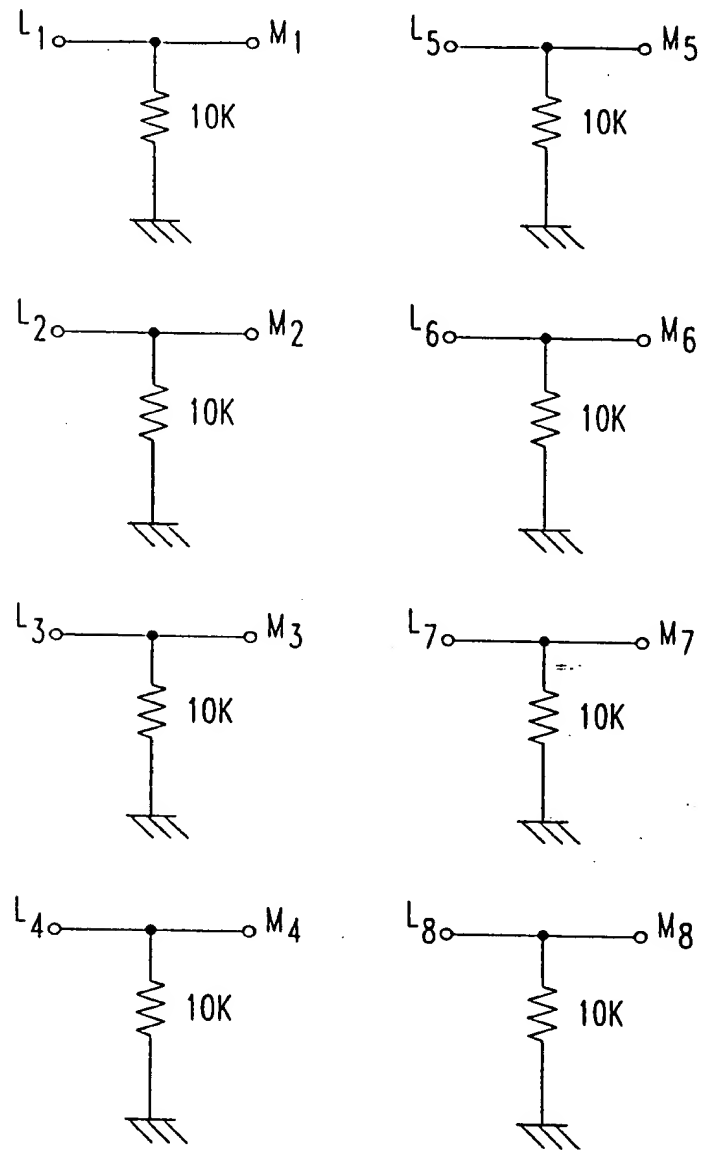


FIG.28

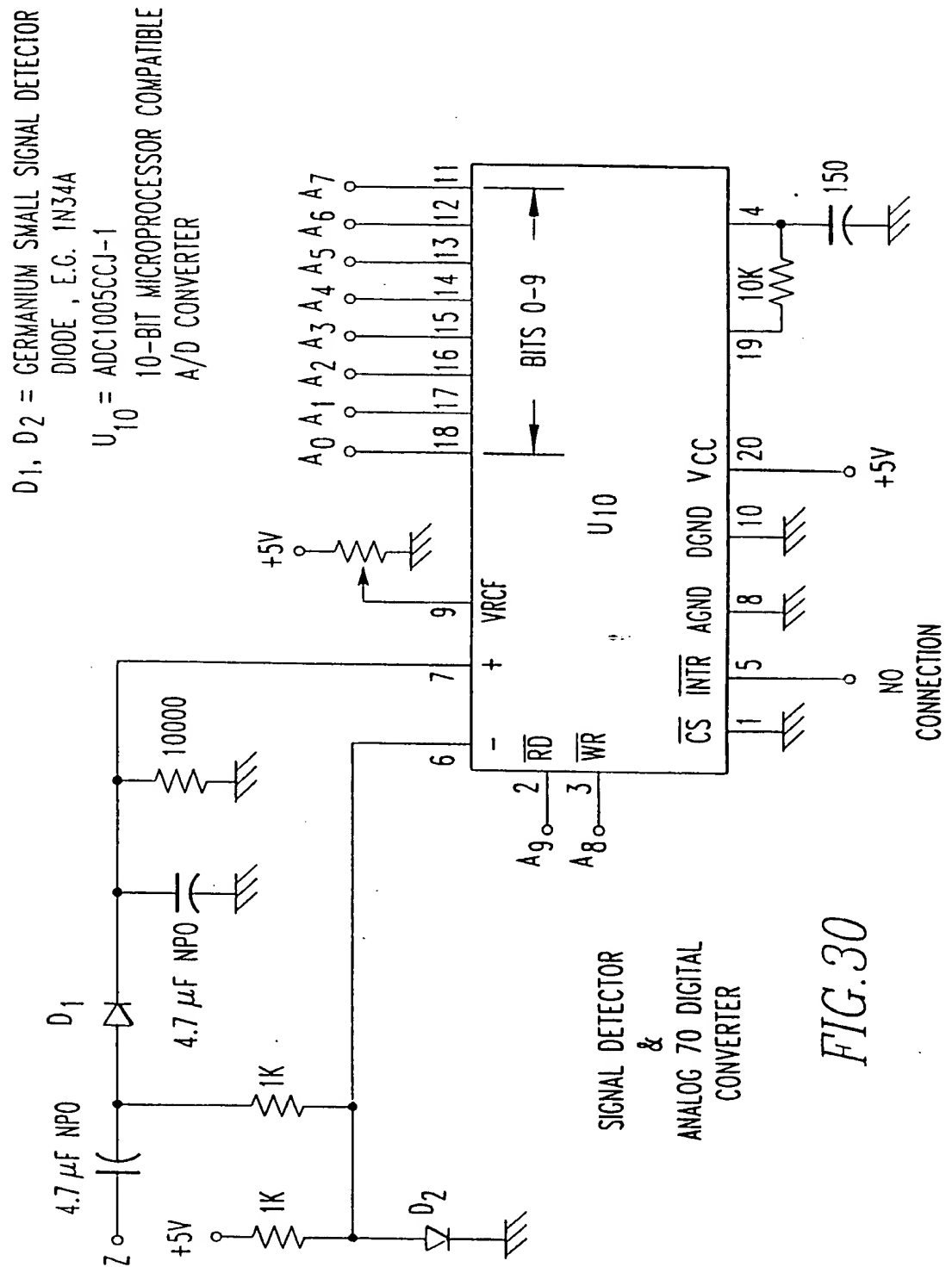
24\140



OUTPUT MUX LOAD RESISTORS

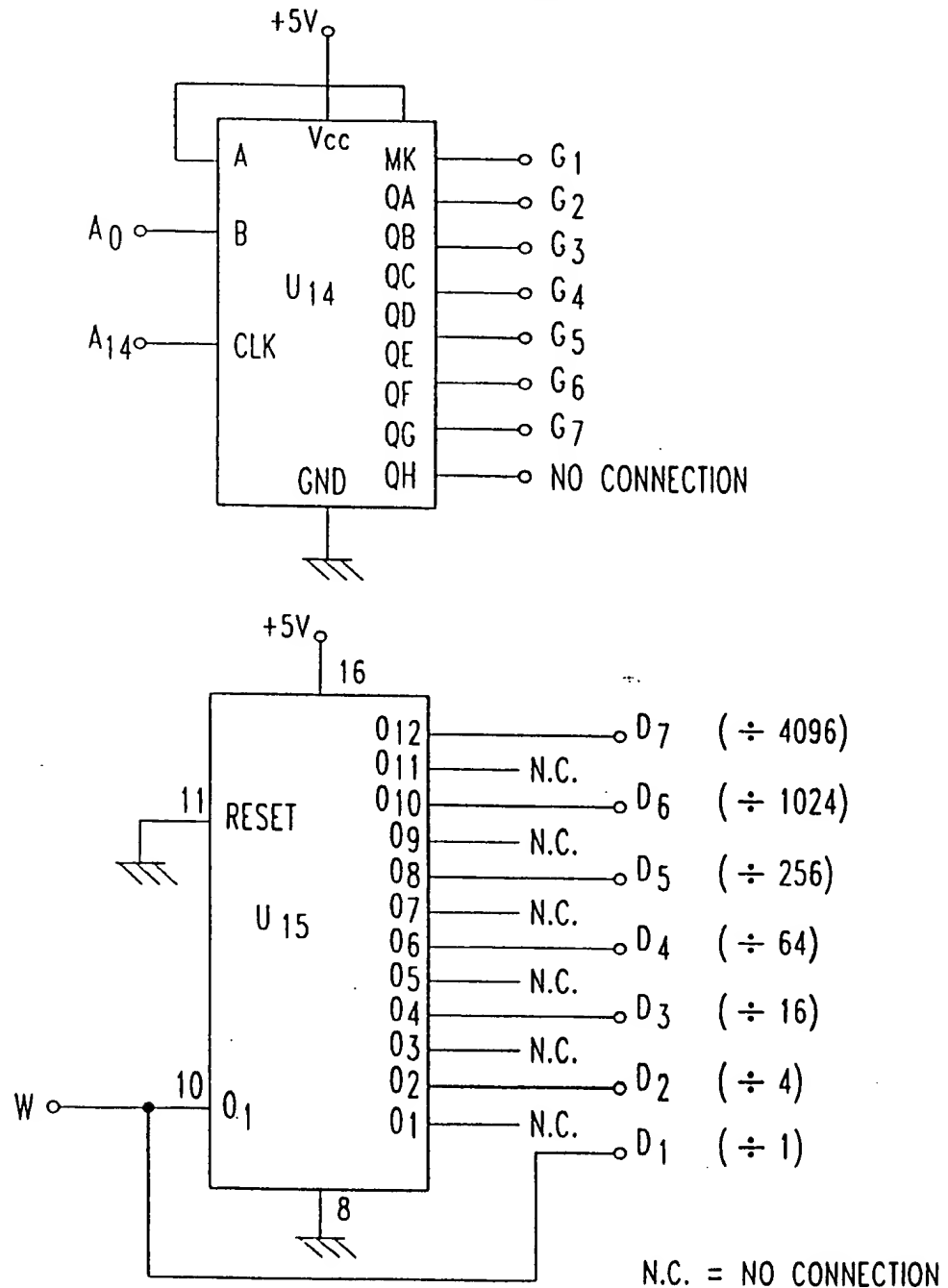
FIG.29

25\140



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FREQUENCY DIVIDER & FREQUENCY DIVIDER
GATE SHIFT REGISTER

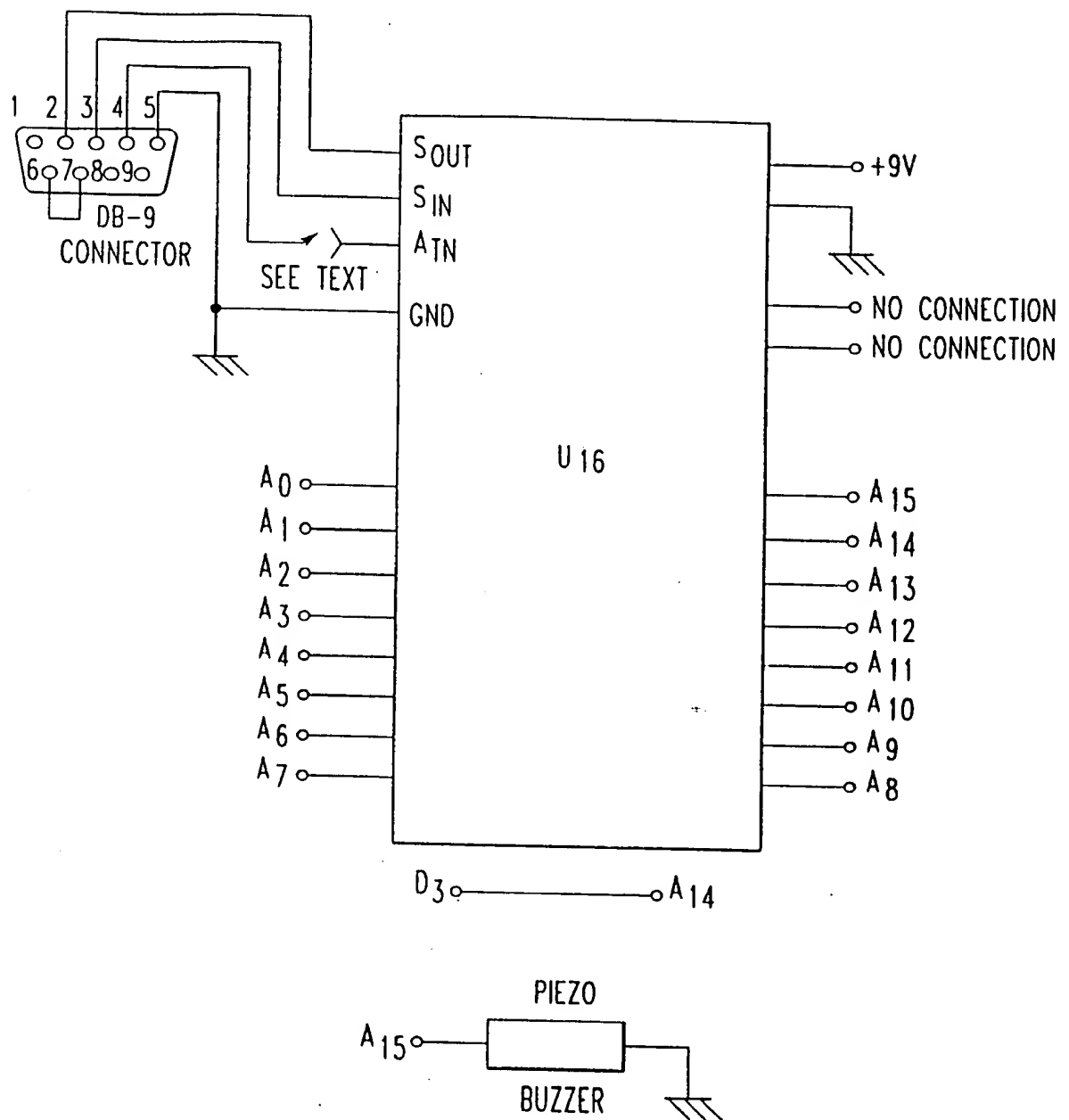


U₁₄ = SN74HC164N
8-BIT PARALLEL-OUT SERIAL SHIFT REGISTER

U₁₅ = 74HC4040
12-STAGE RIPPLE CARRY BINARY COUNTER

FIG. 32

28\140

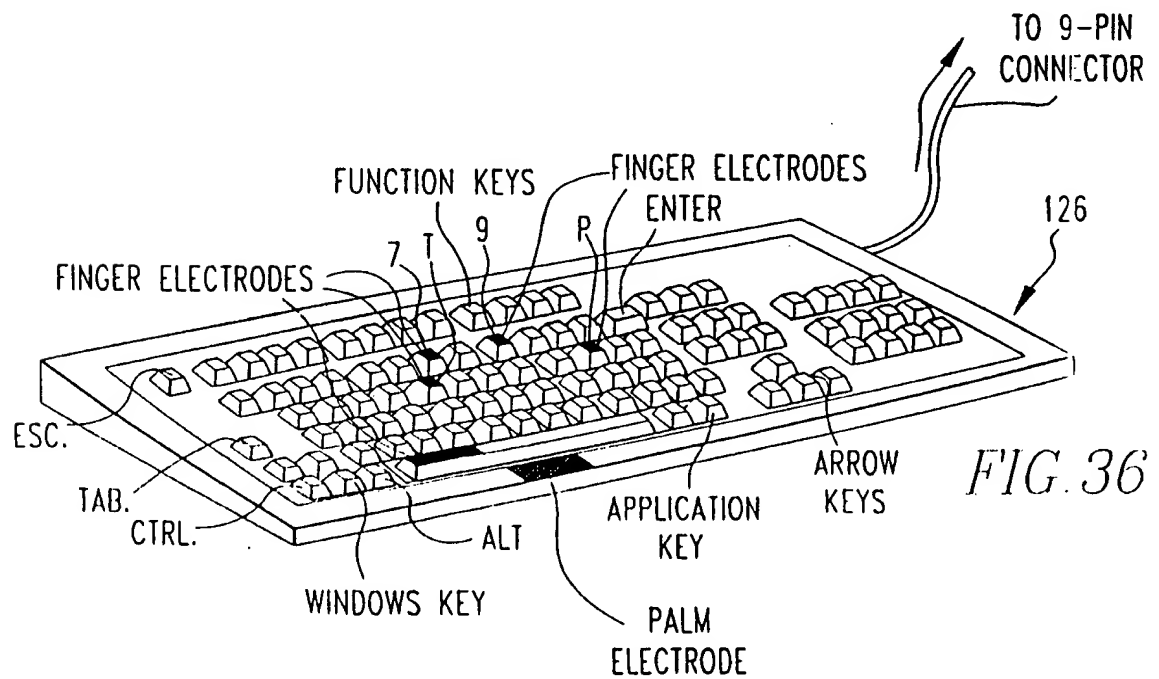
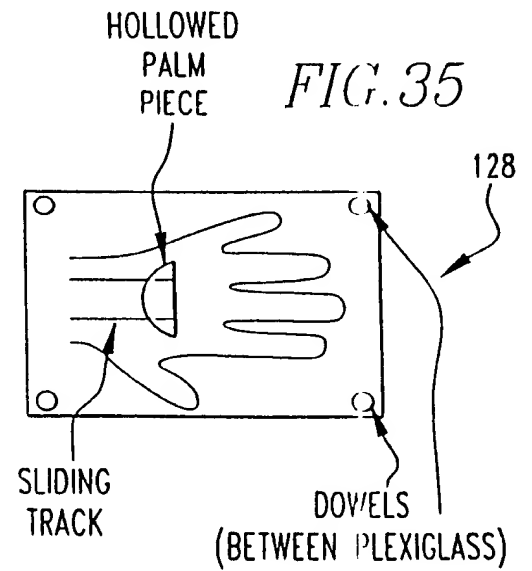
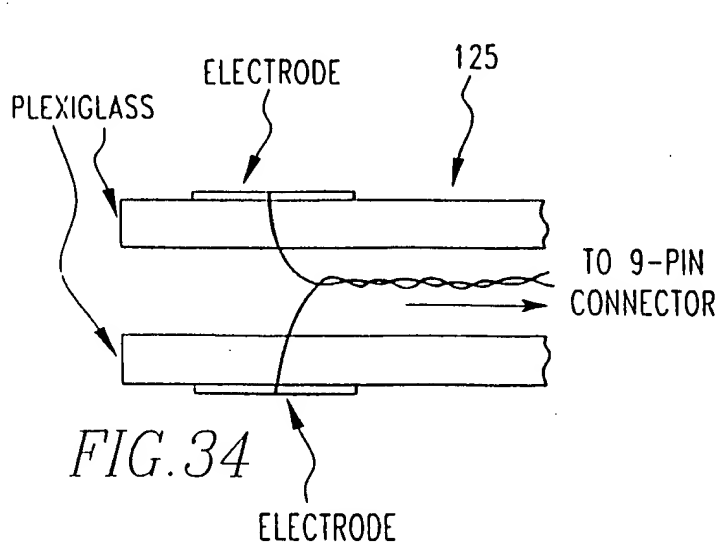


MICROPROCESSOR

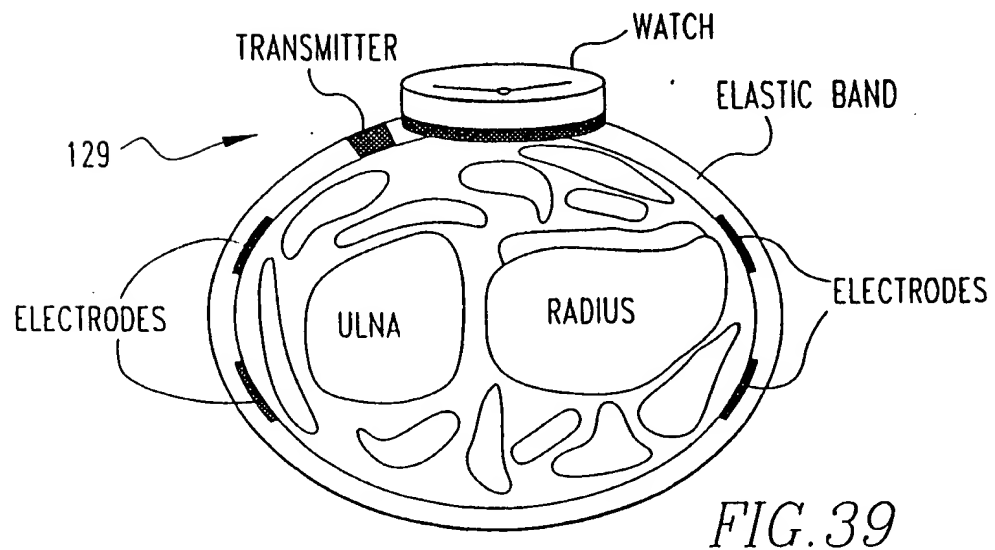
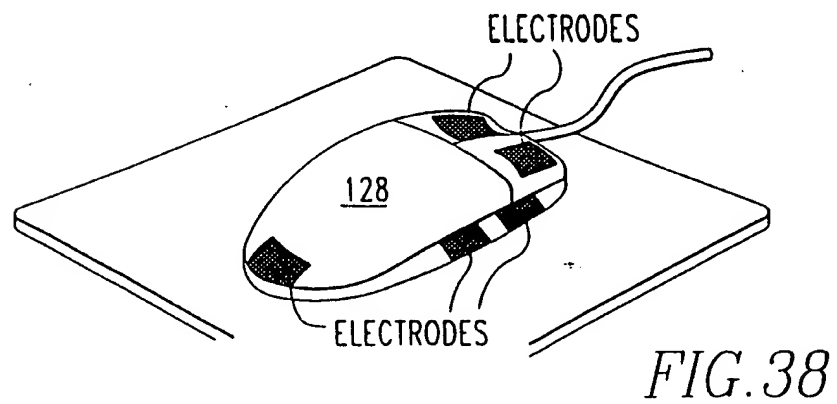
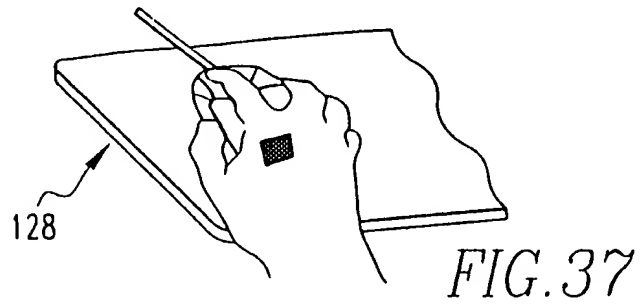
U₁₆ = PARALLAX, INC. BASIC STAMP II
MICROCONTROLLER W/2048-BYTE EEPROM,
26 BYTE RAM, 16 I/O LINES & SERIAL INTERFACE.

FIG. 33

29\140



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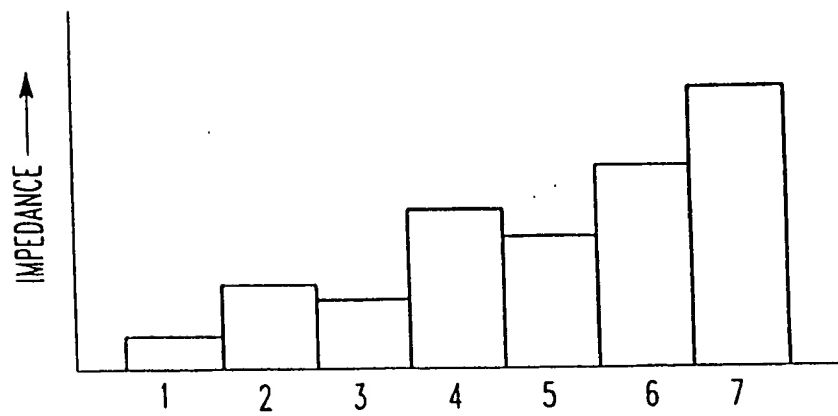
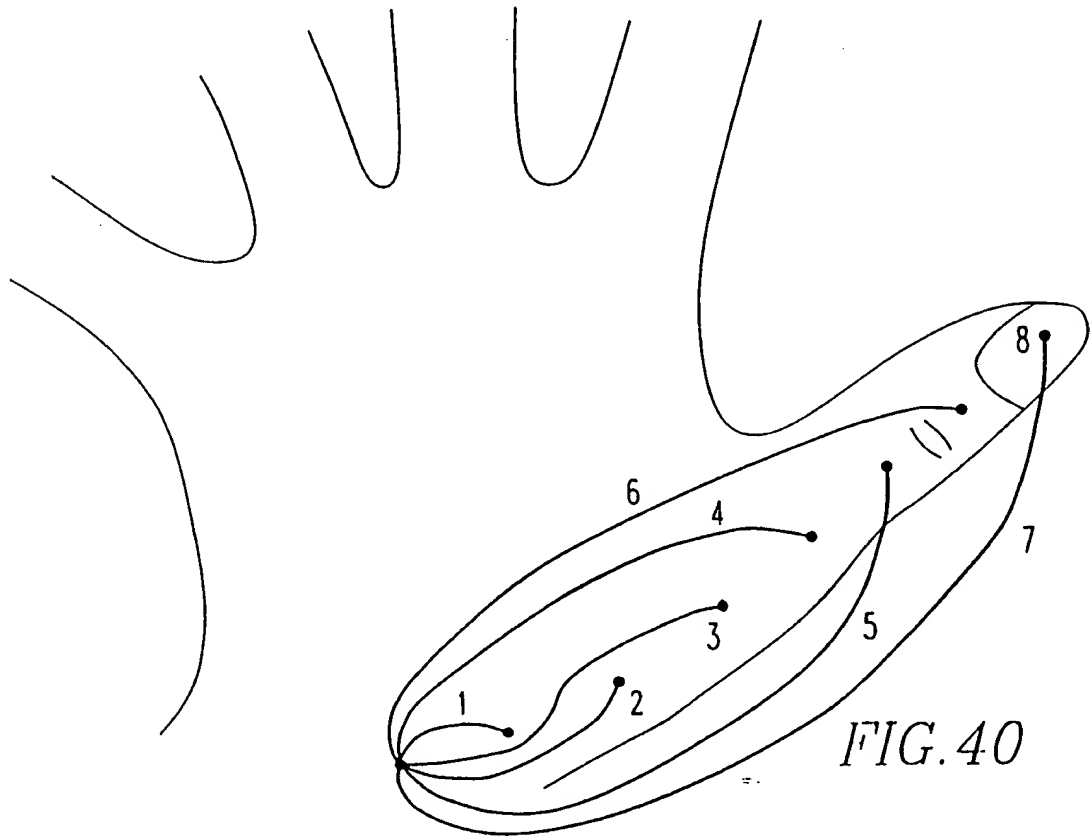
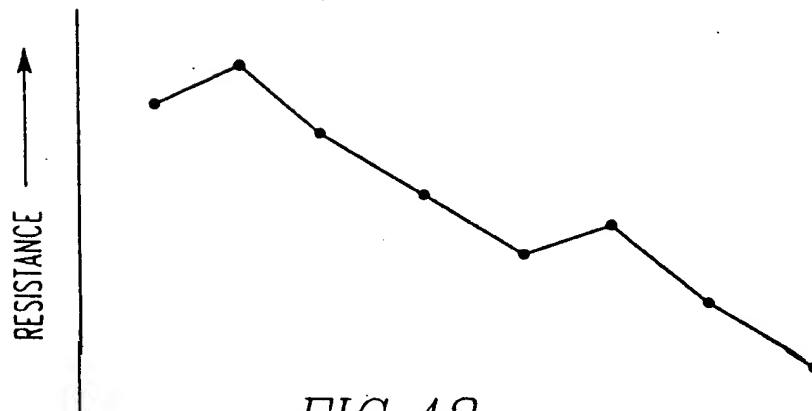
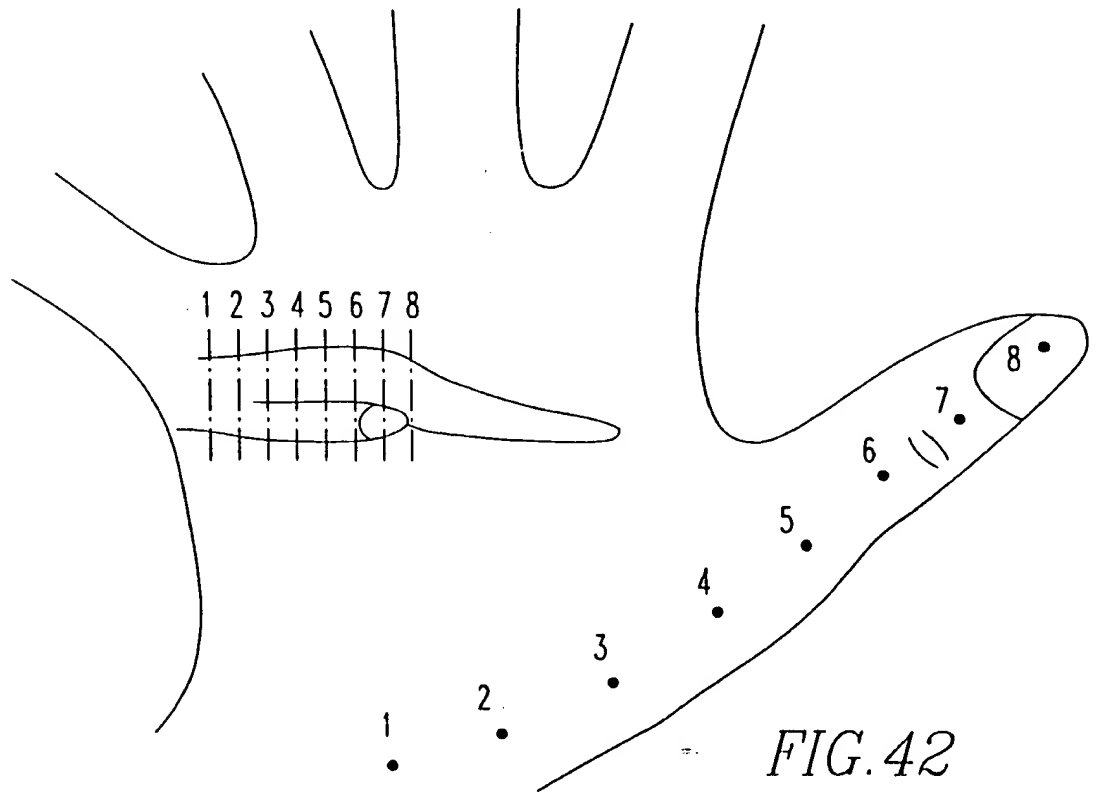


FIG. 41

32\140



33\140

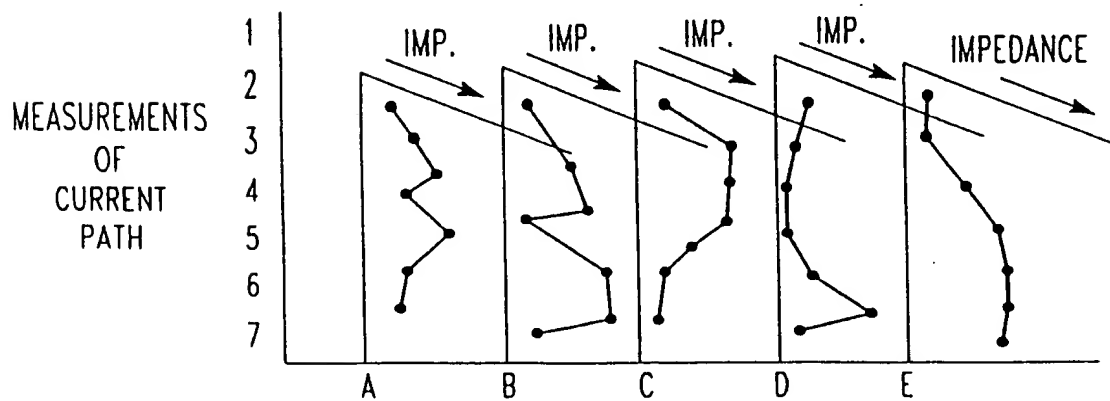
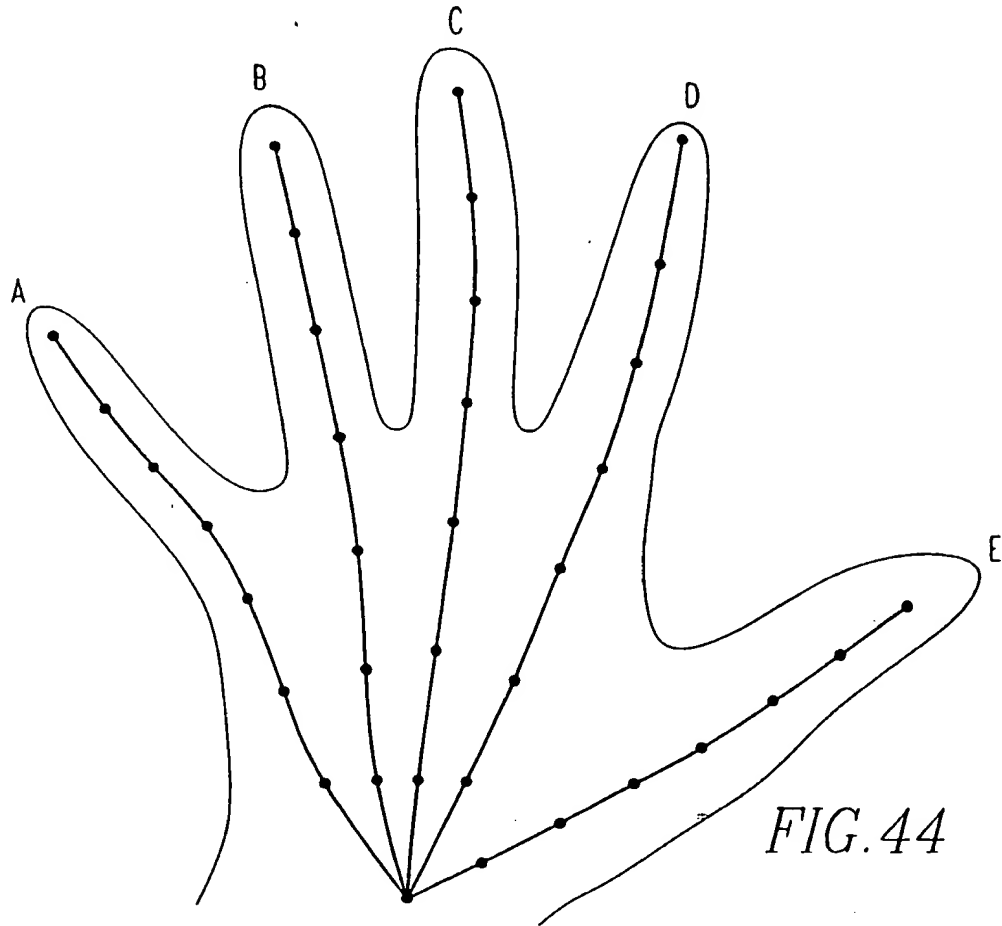


FIG. 45

34\140

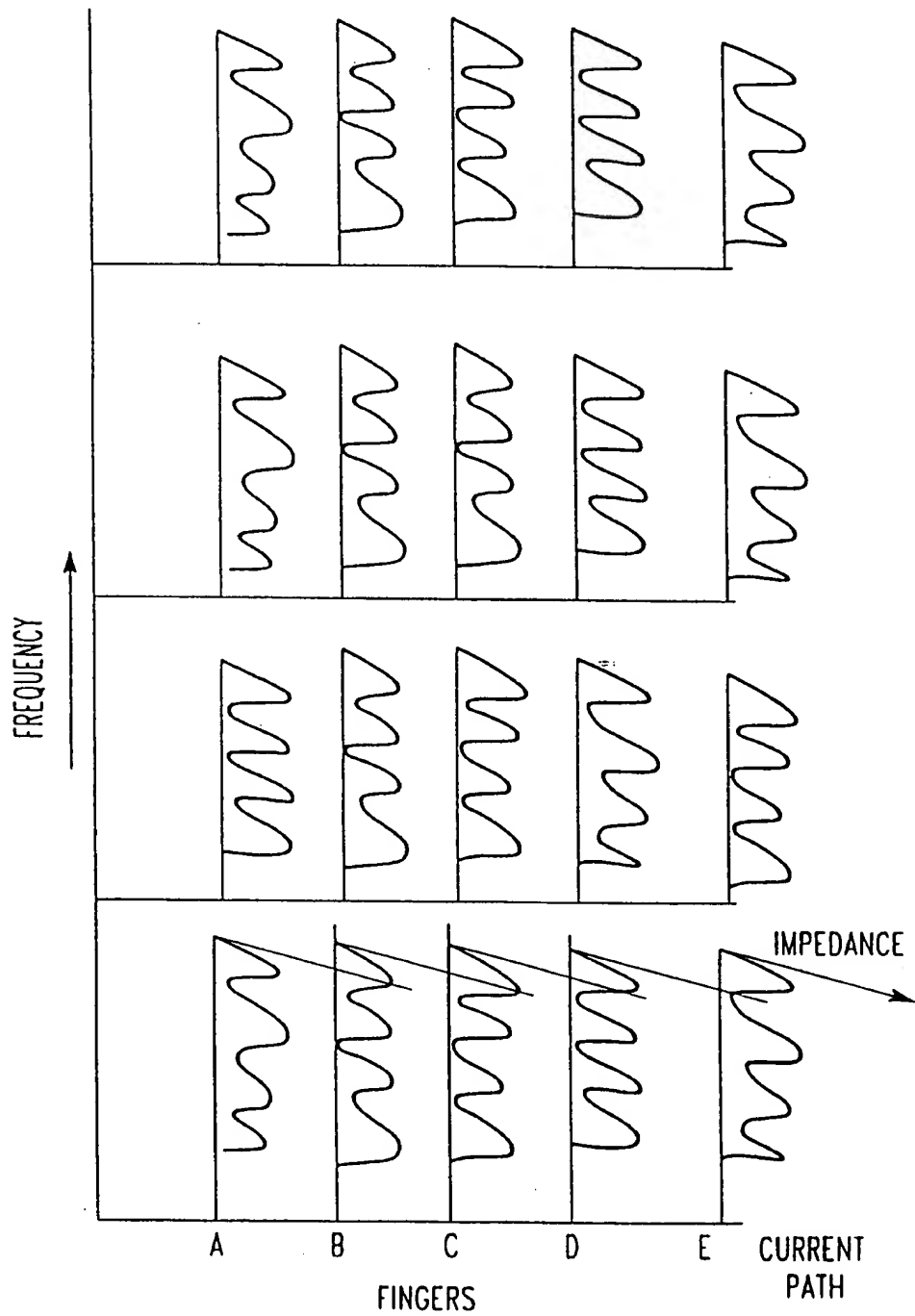
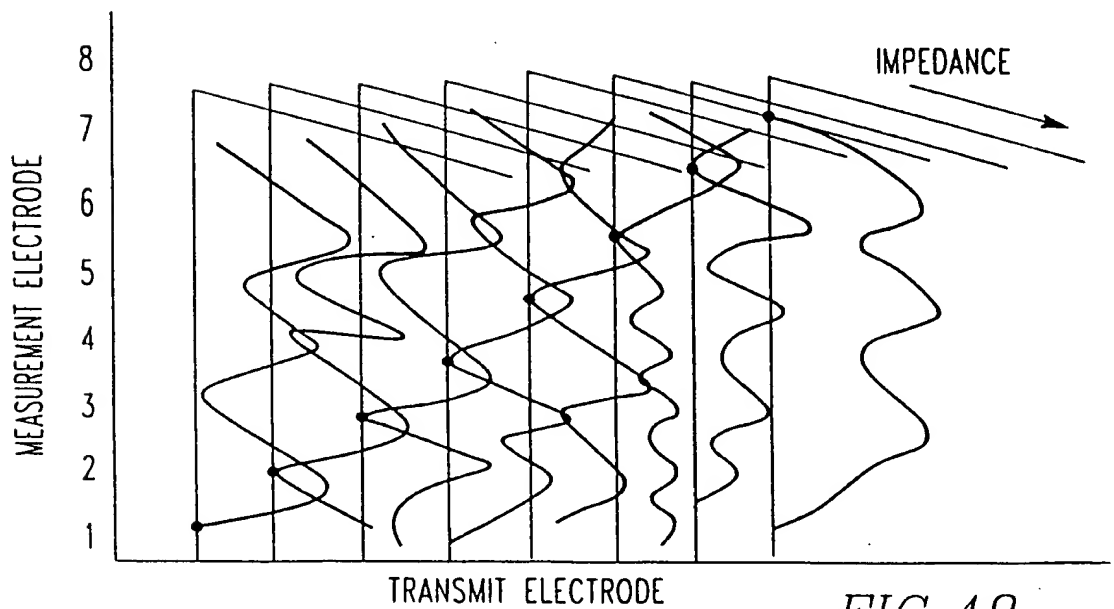
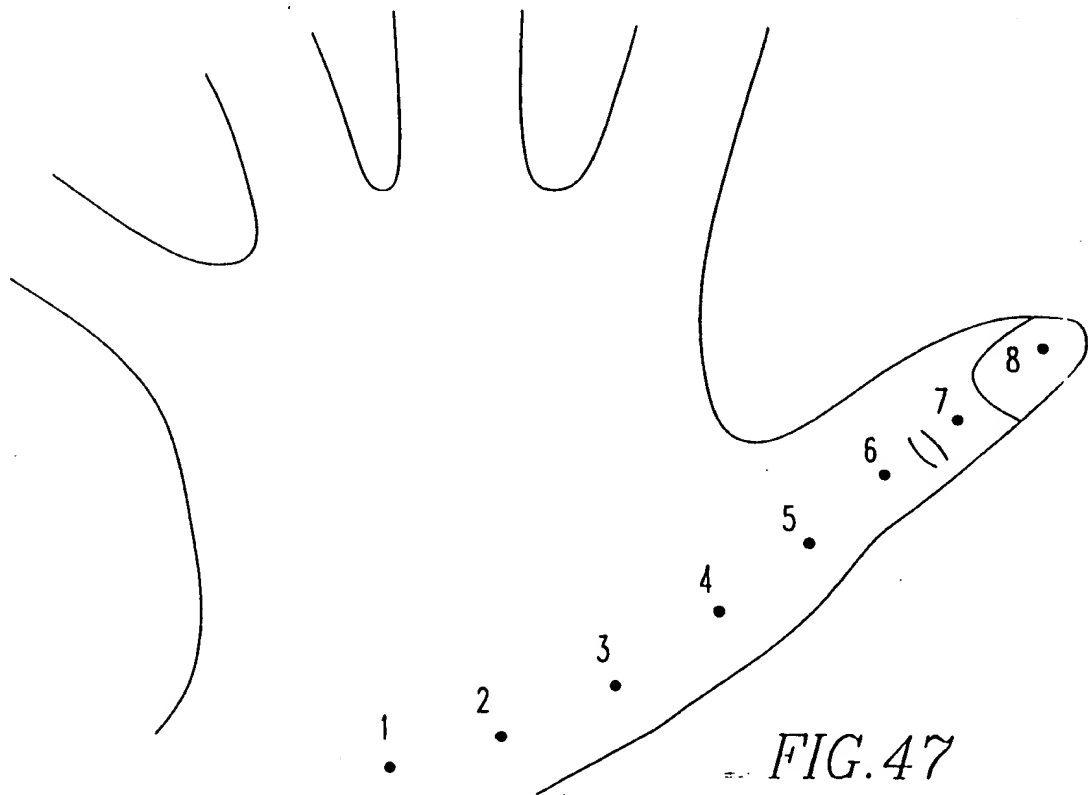


FIG. 46

35\140



36\140

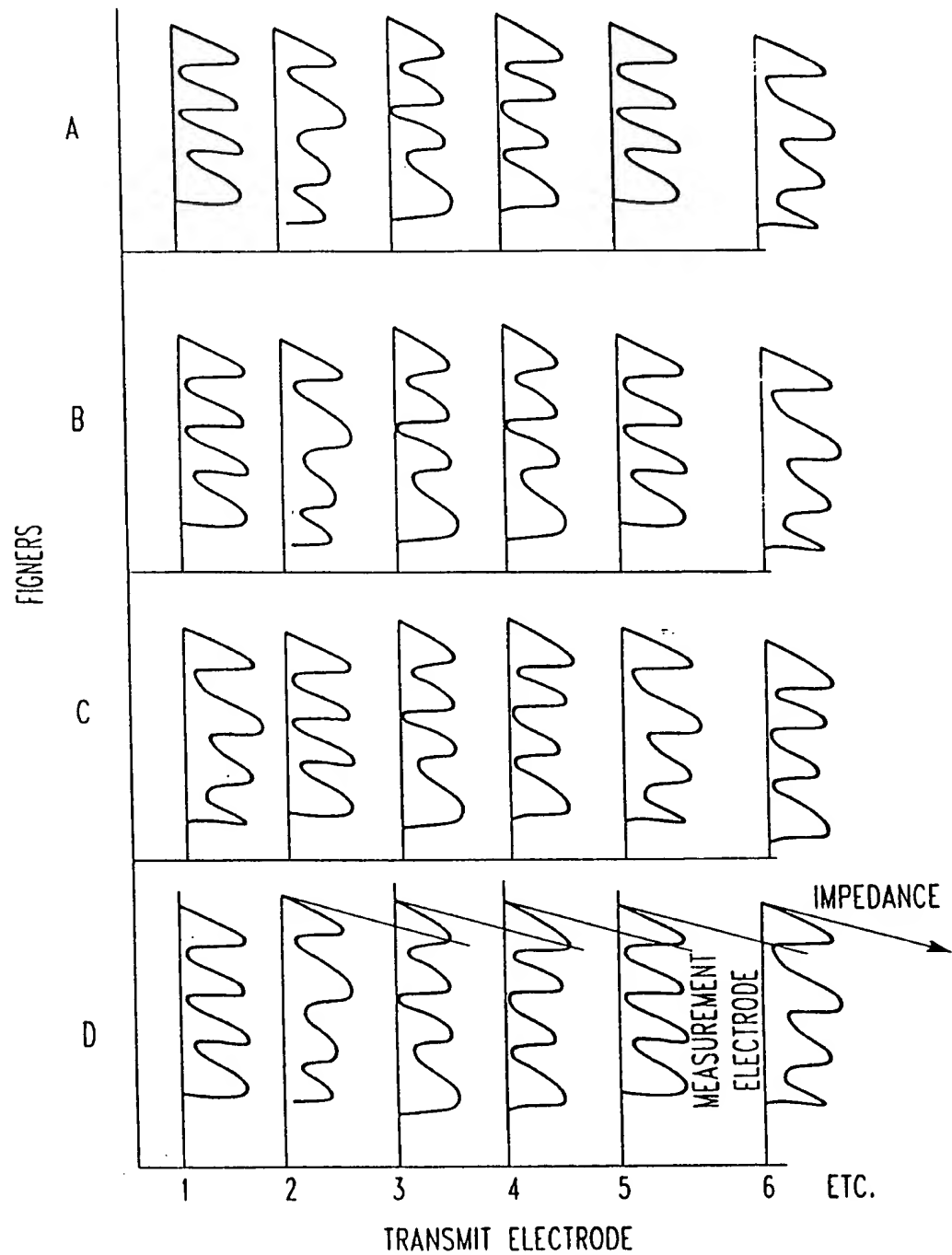


FIG. 49

37\140

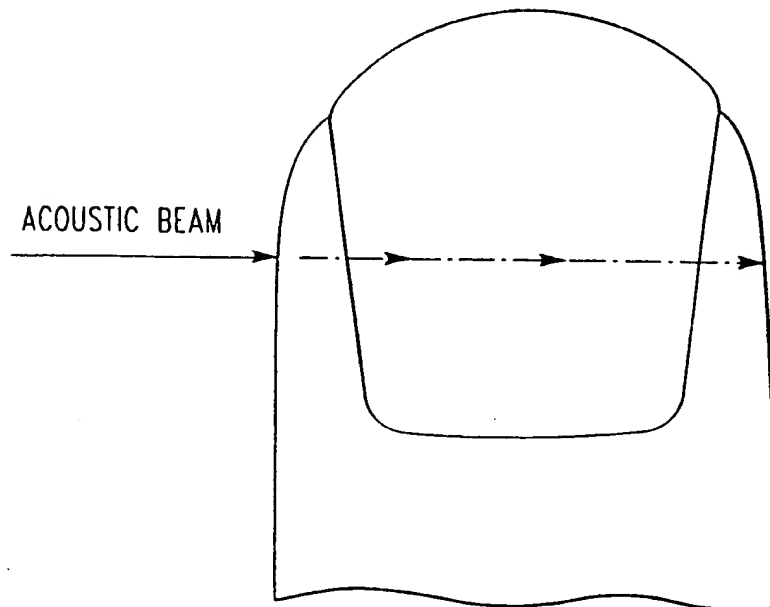


FIG.50

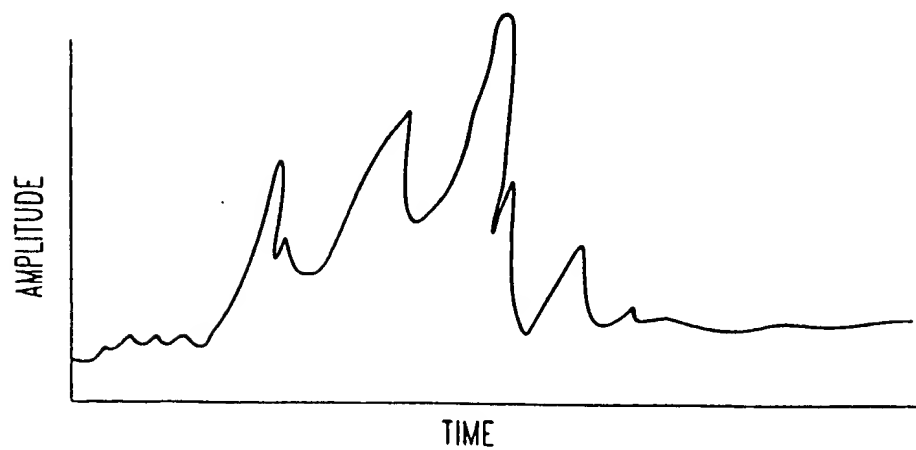
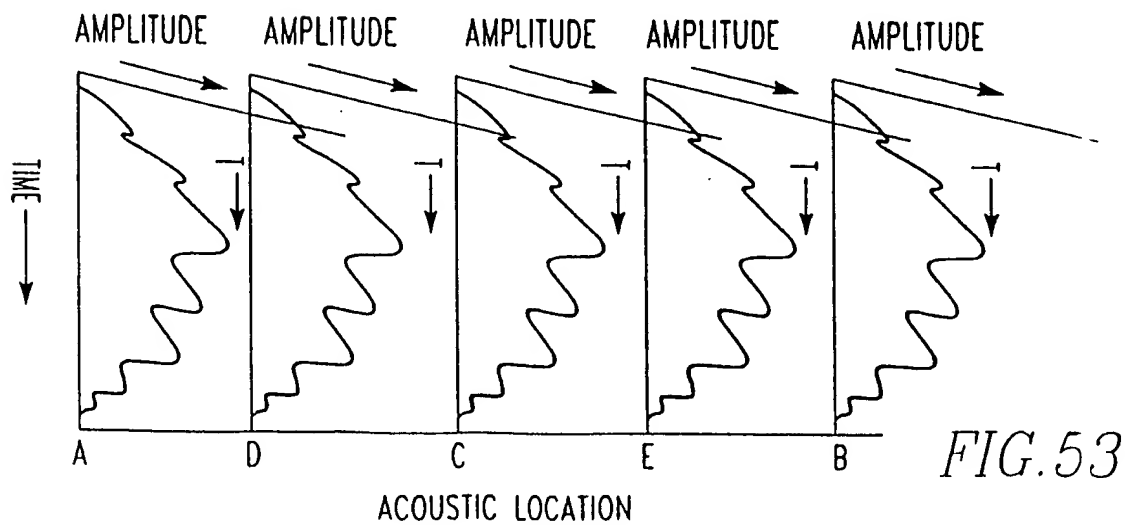
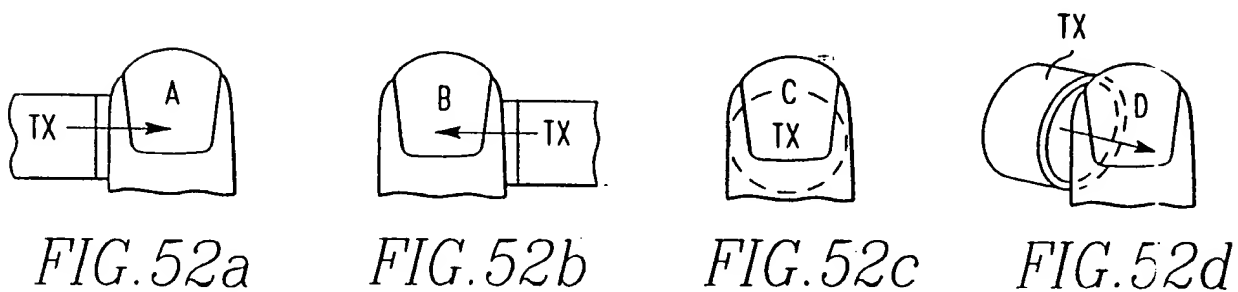
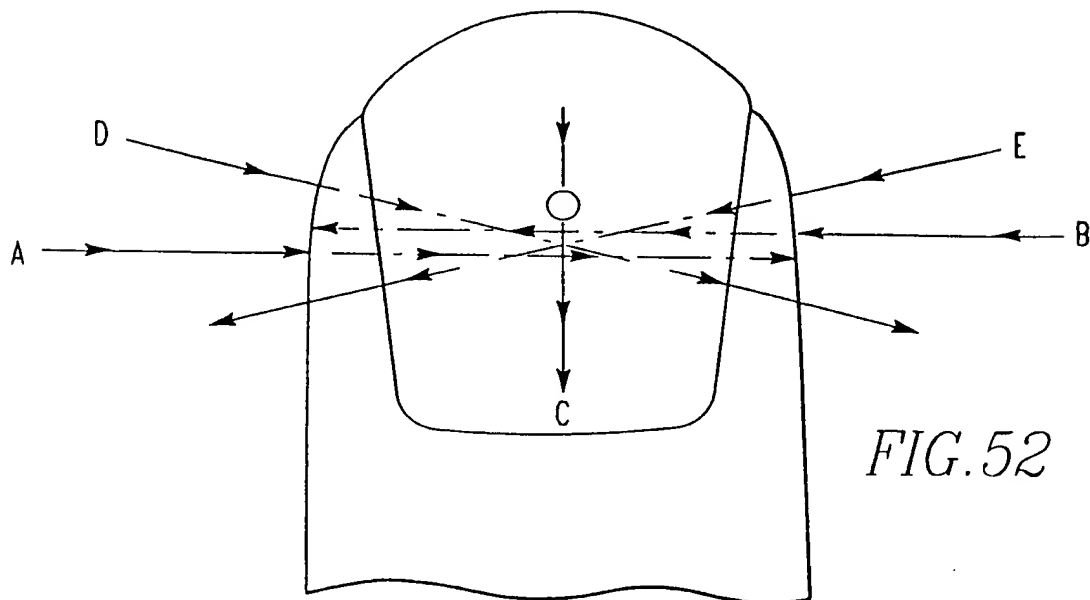


FIG.51

38\140



39\140

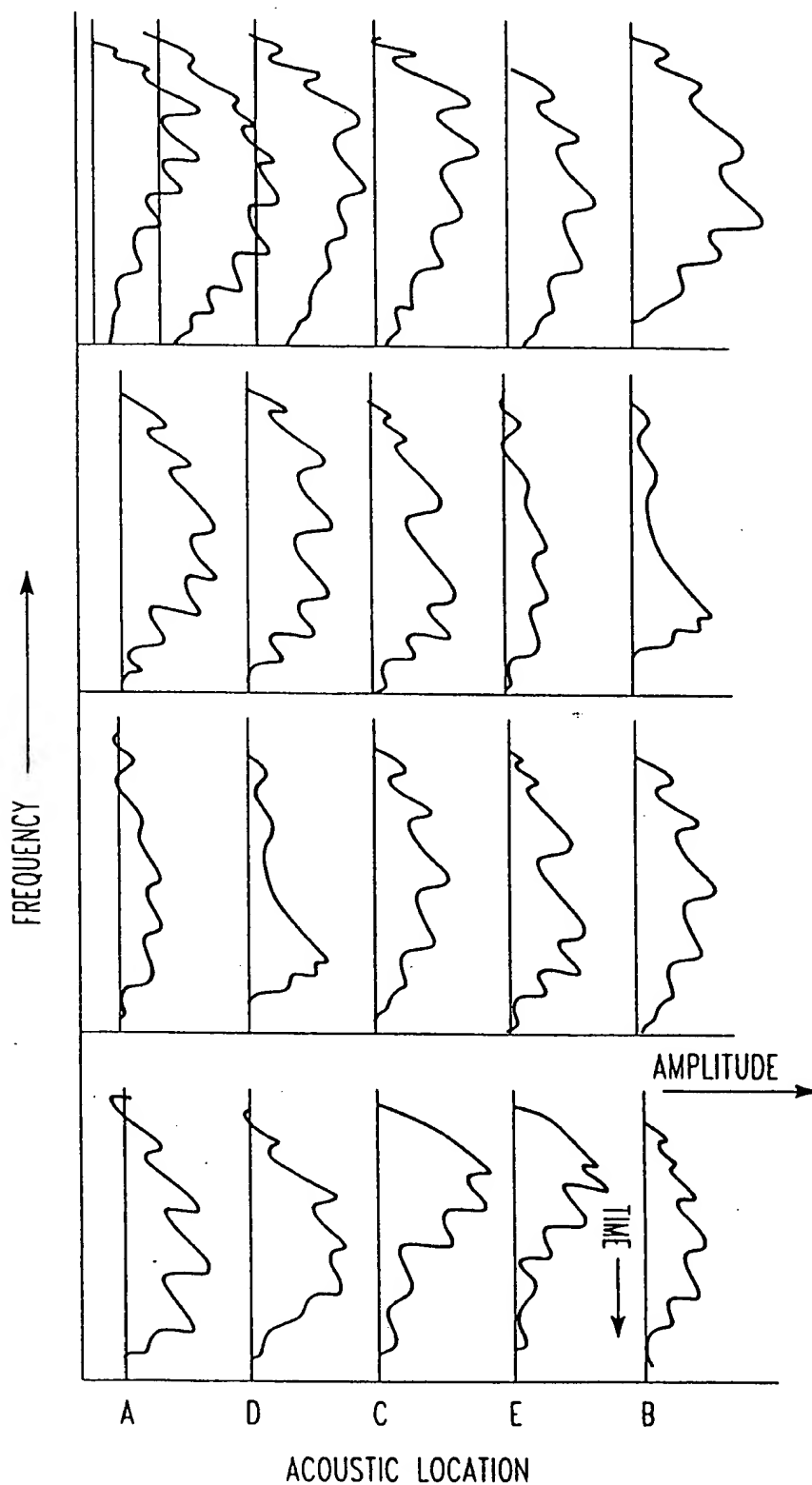


FIG. 54

40\140

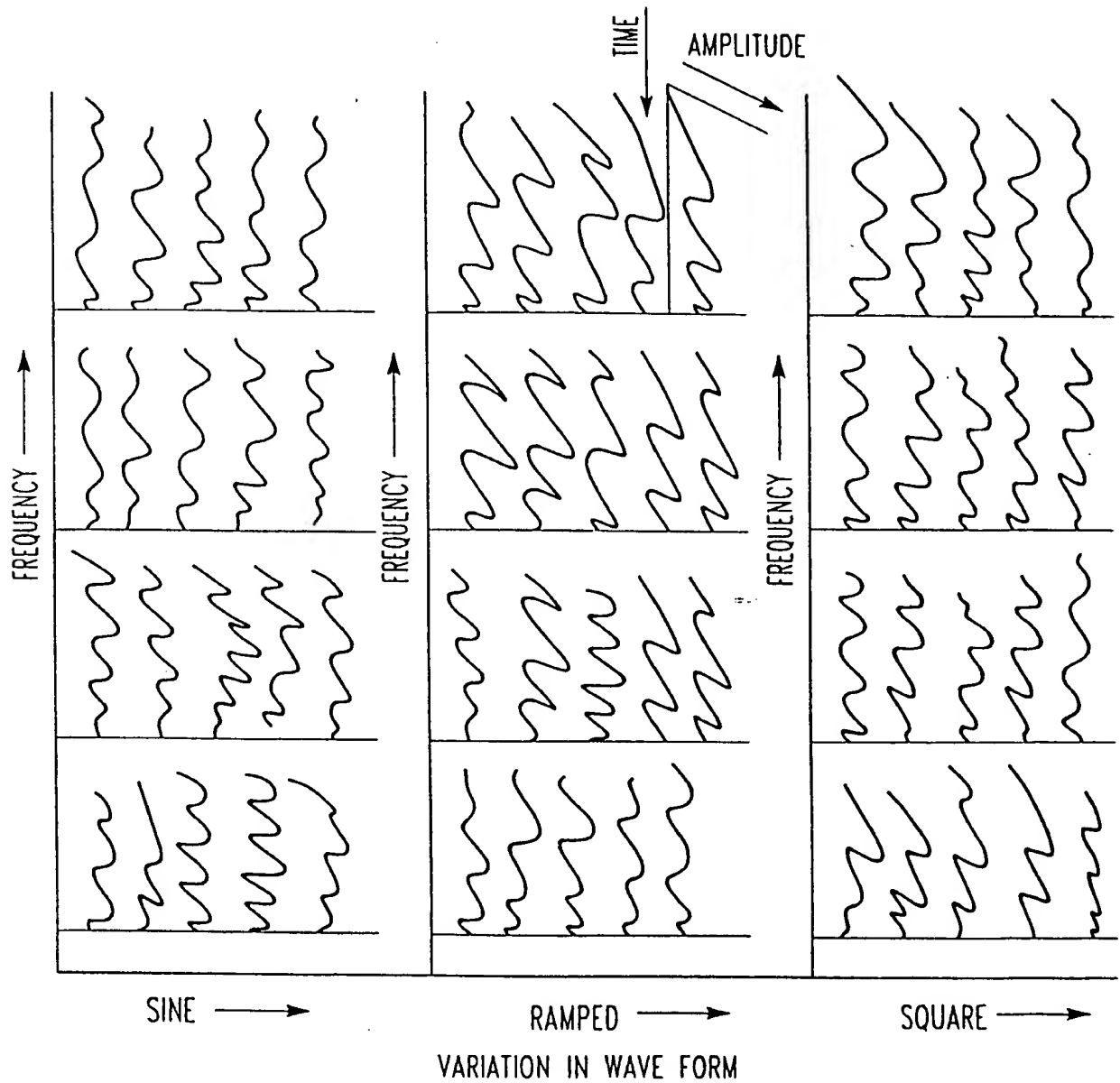


FIG.55

41\140

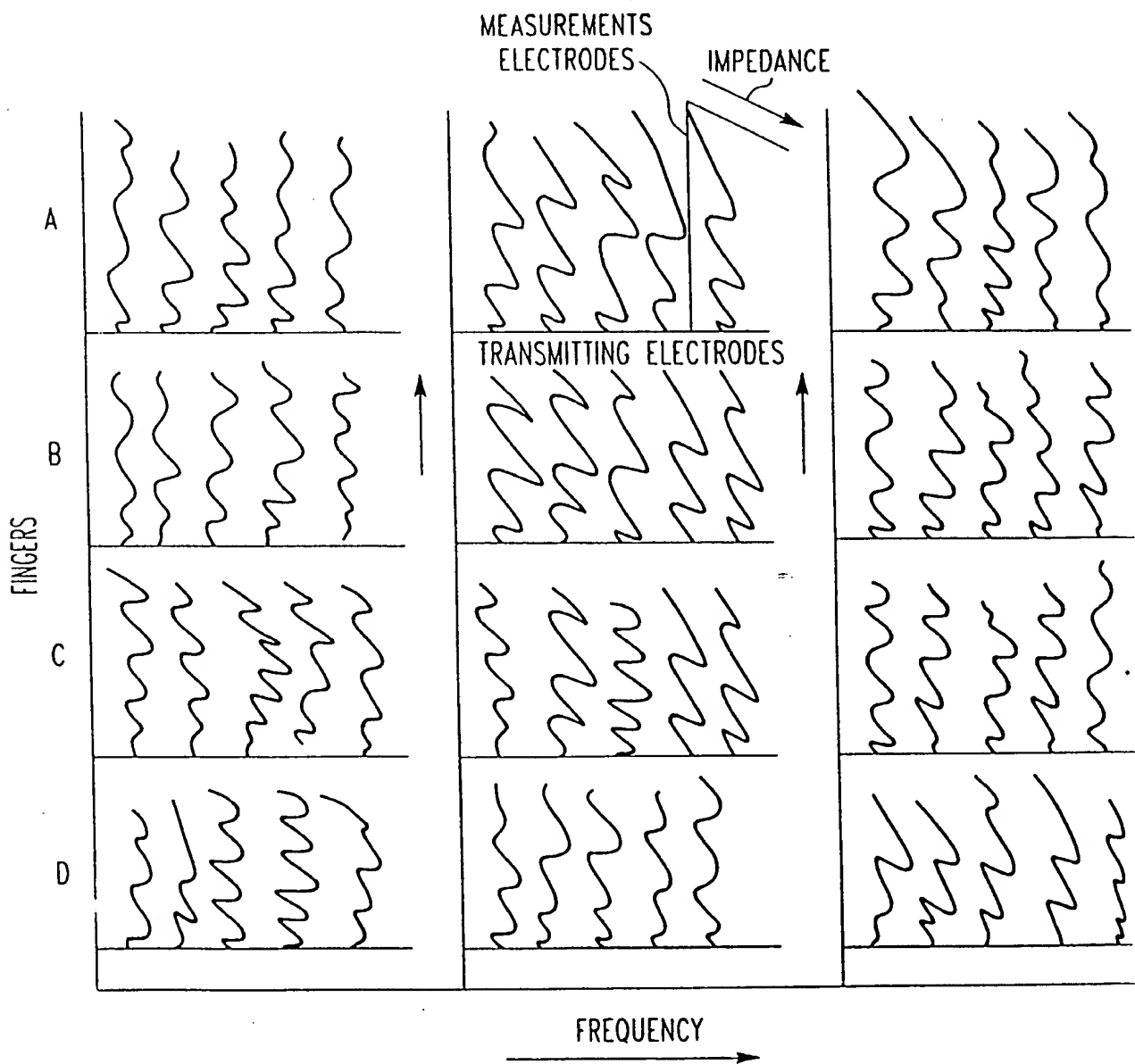


FIG. 56

42\140

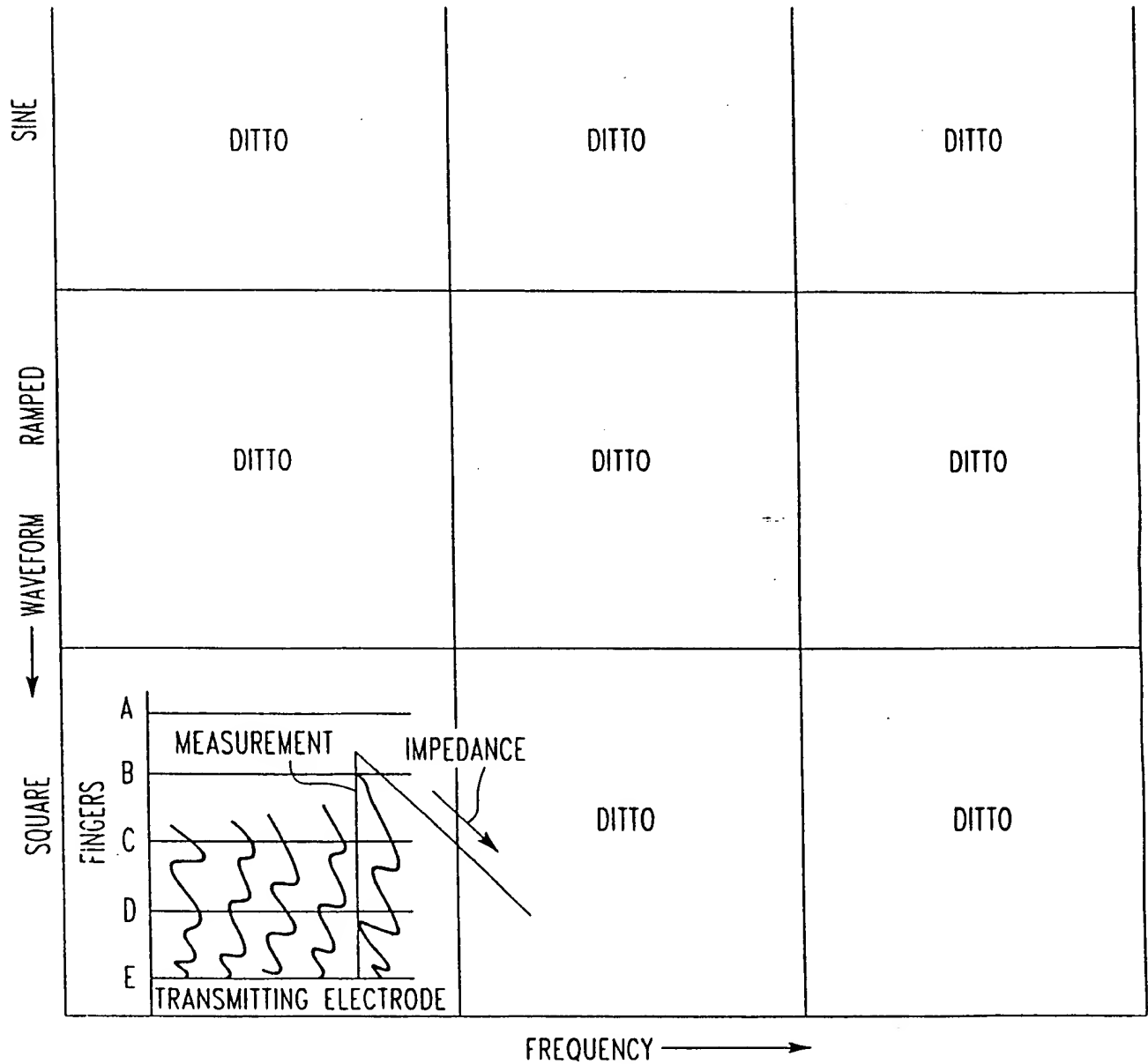


FIG.57

43\140

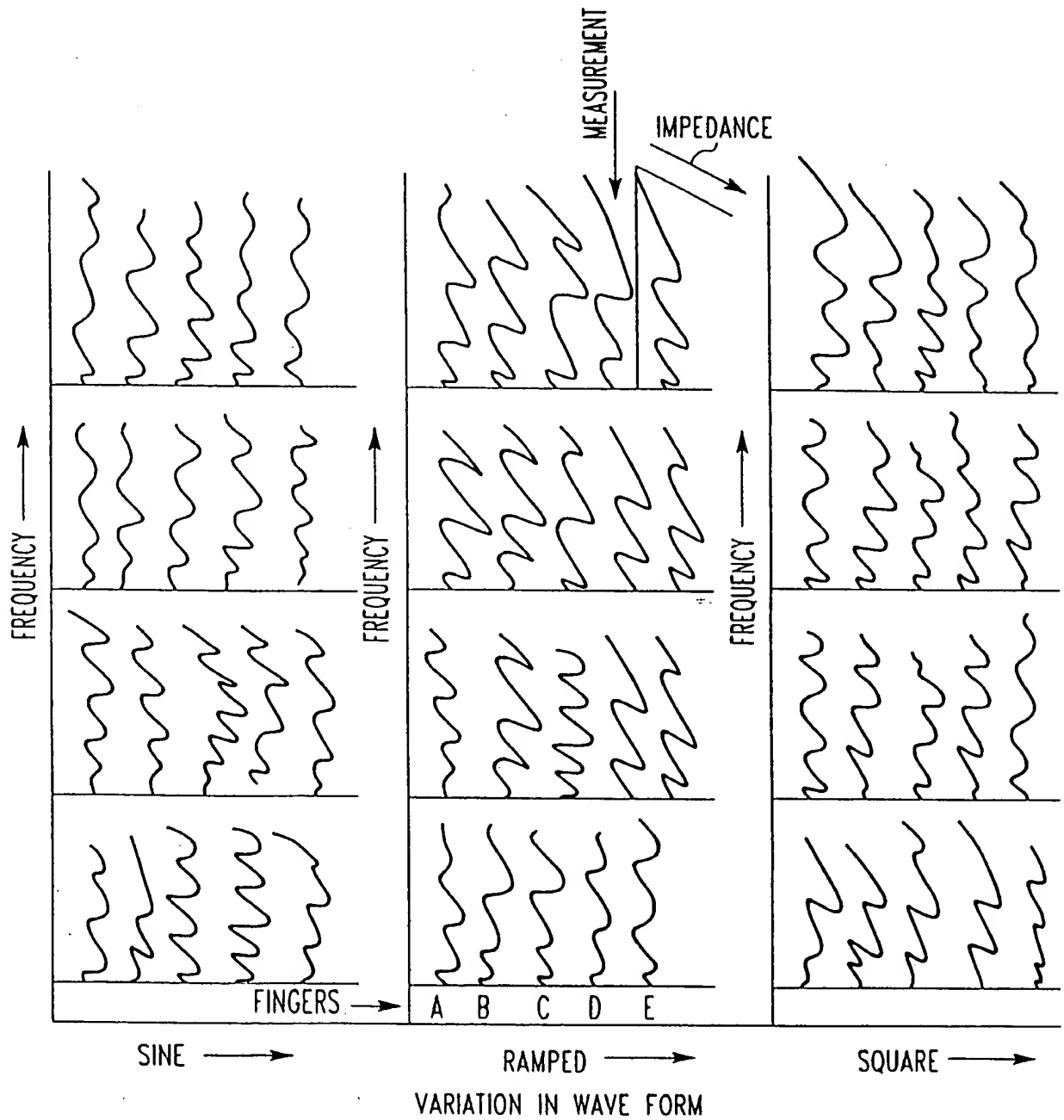


FIG.58

44\140

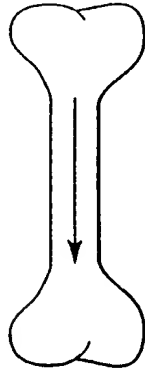


FIG. 59

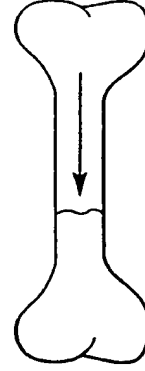


FIG. 60

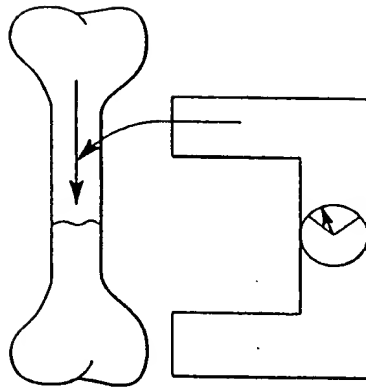


FIG. 61

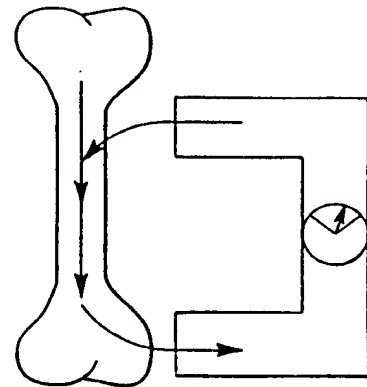


FIG. 62

45\140

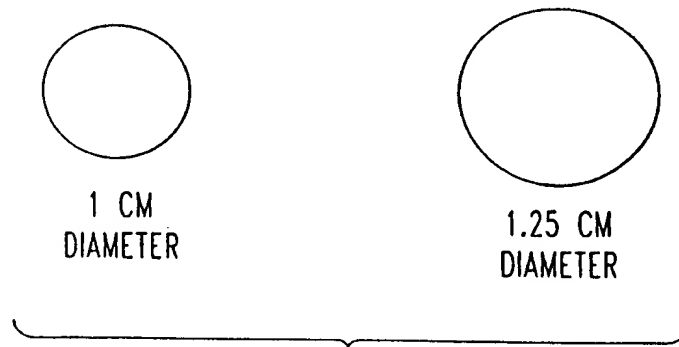


FIG. 63

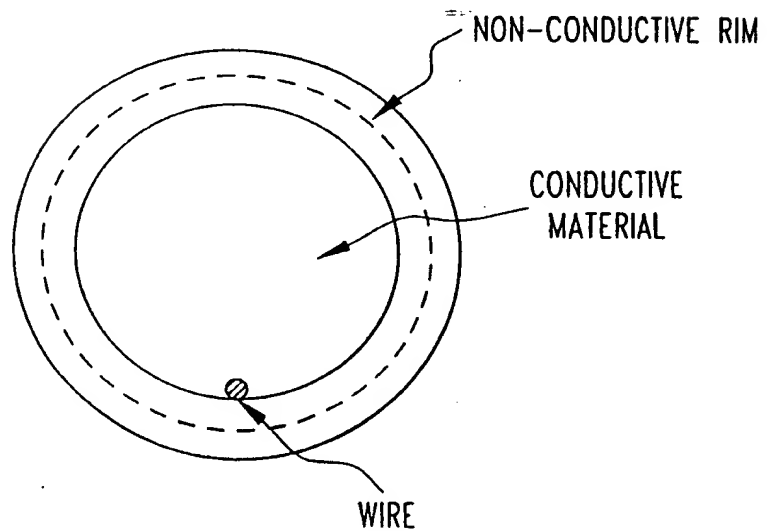
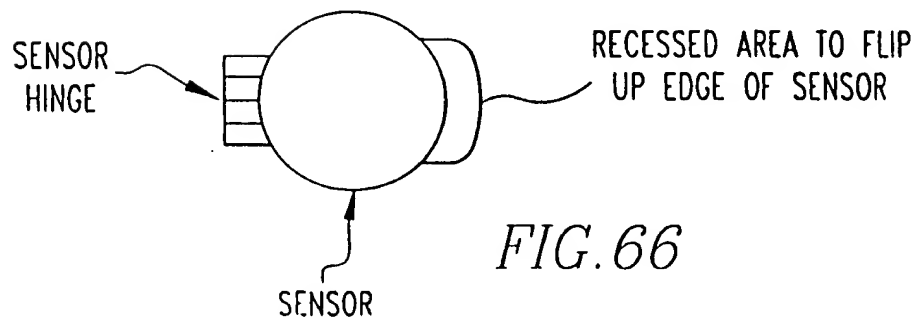
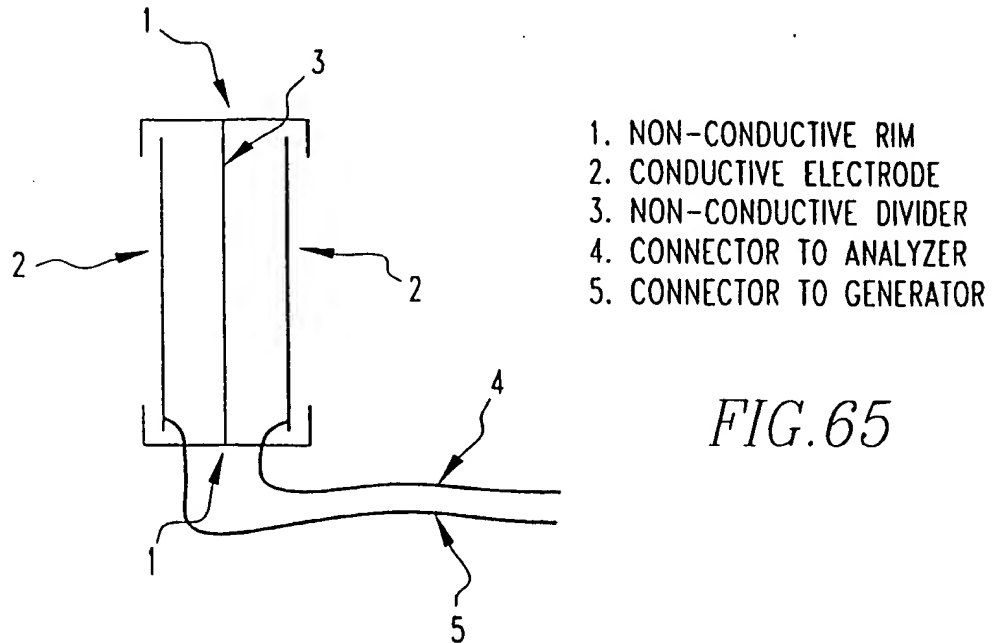
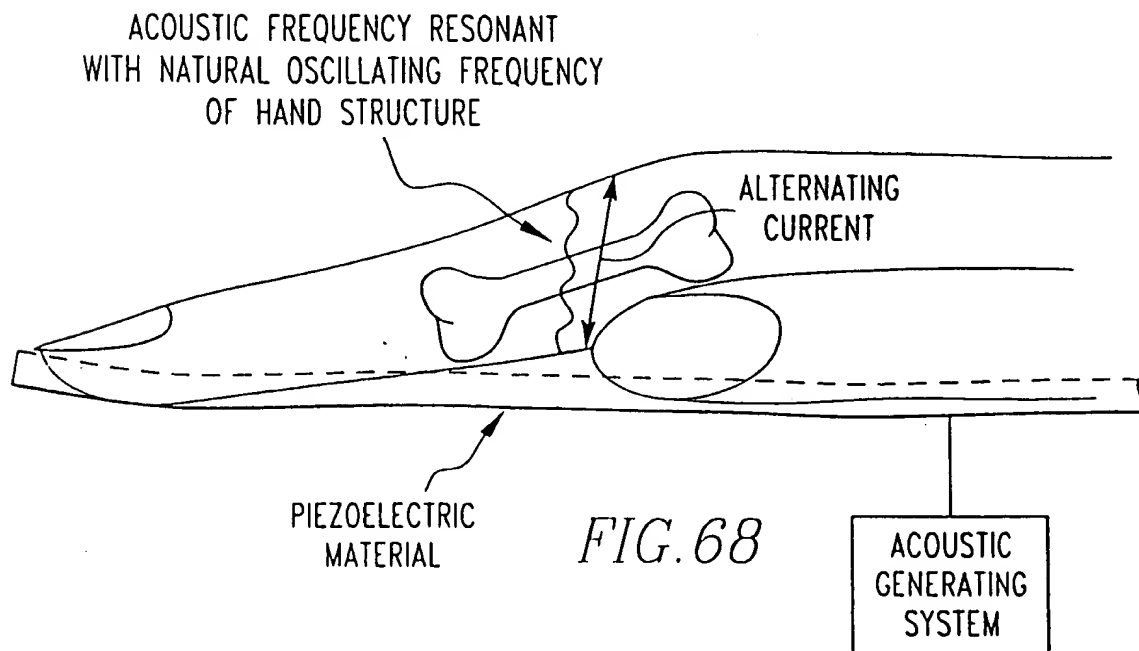
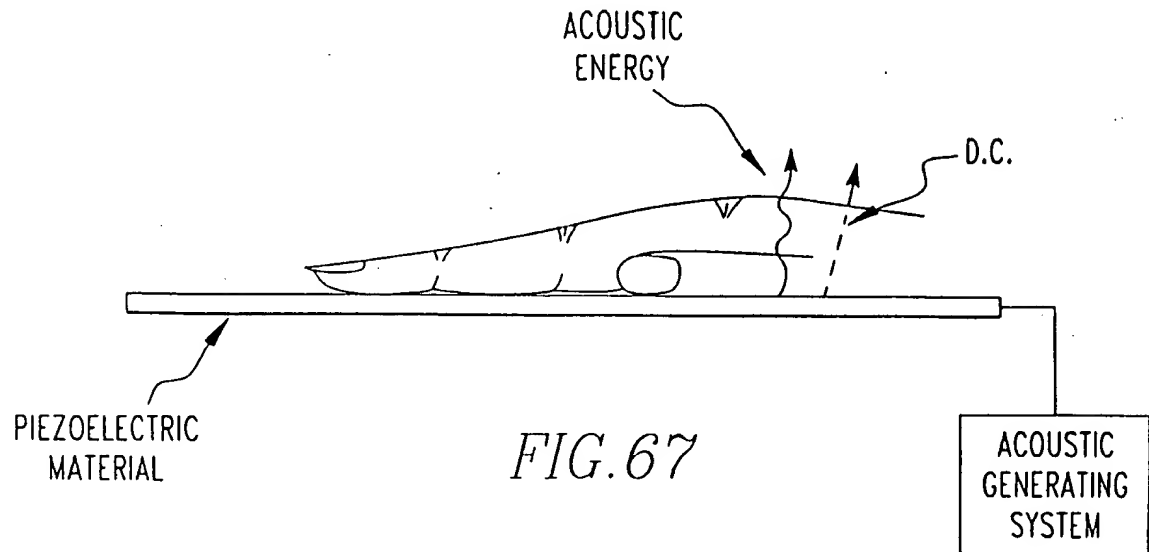


FIG. 64

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47\140



48\140

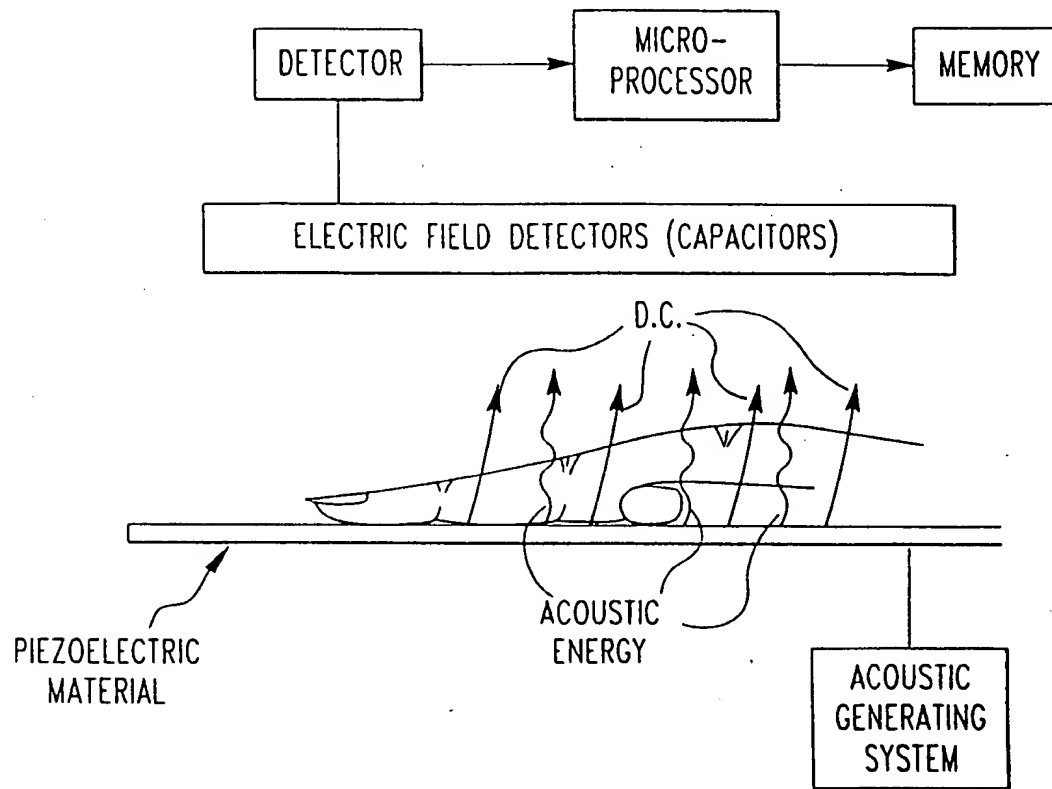
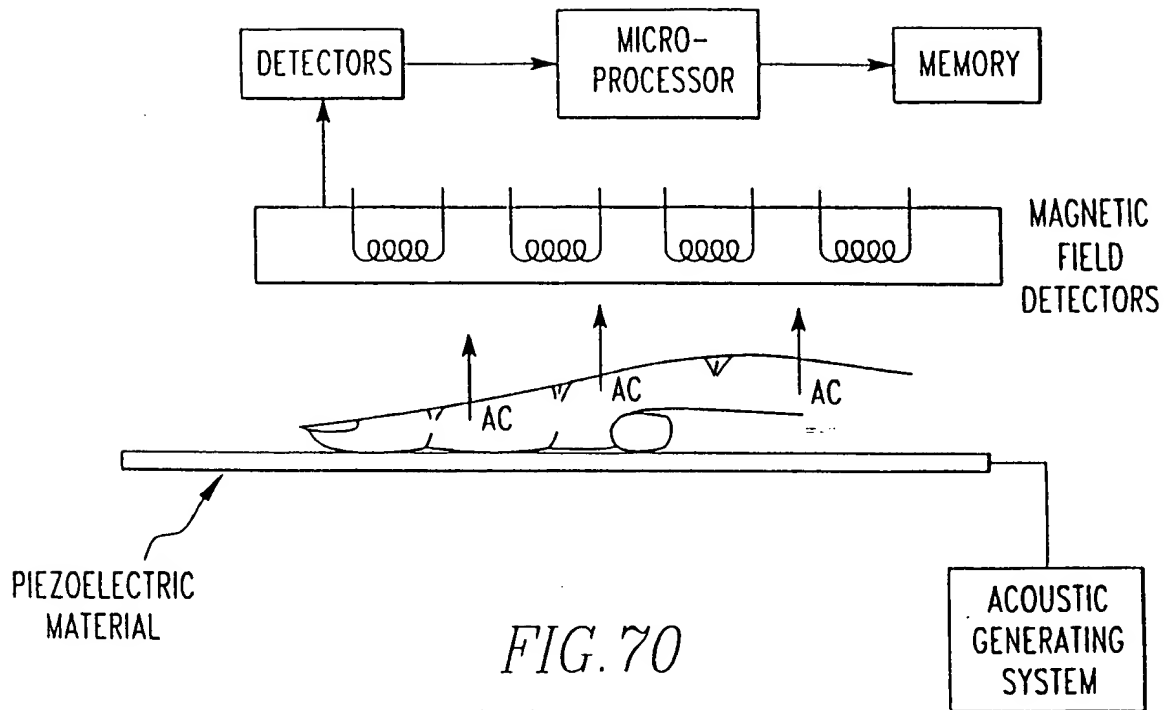


FIG. 69

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50\140

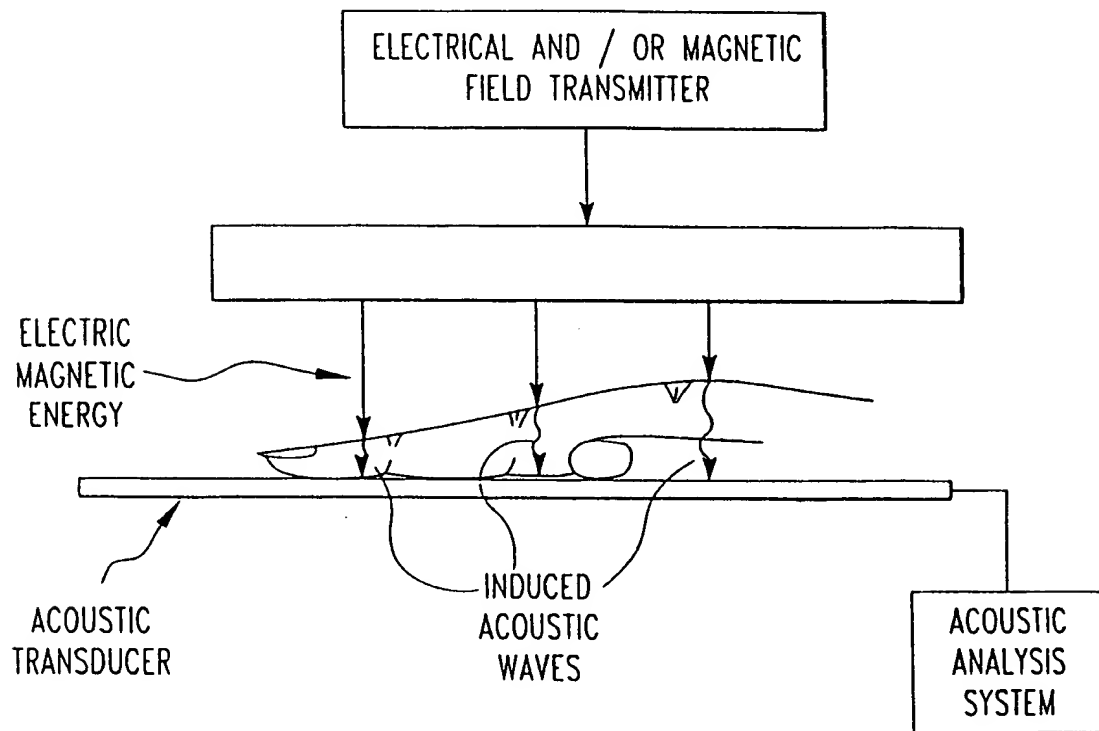


FIG. 71

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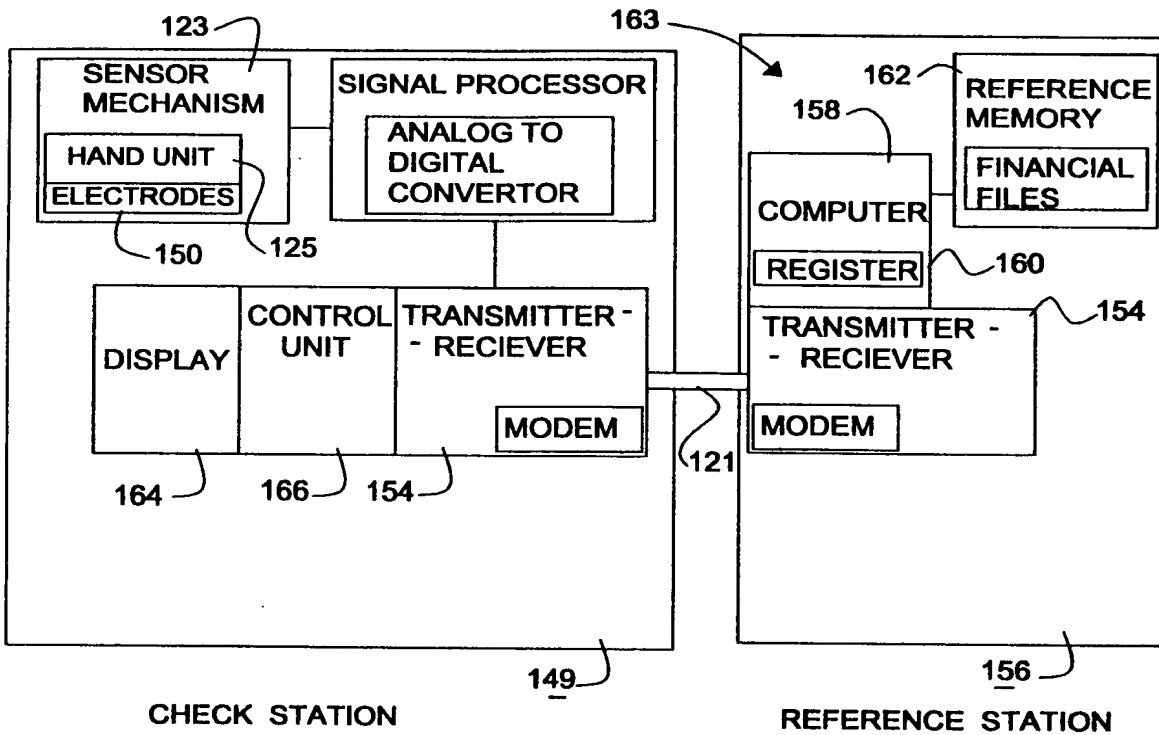


FIG. 72

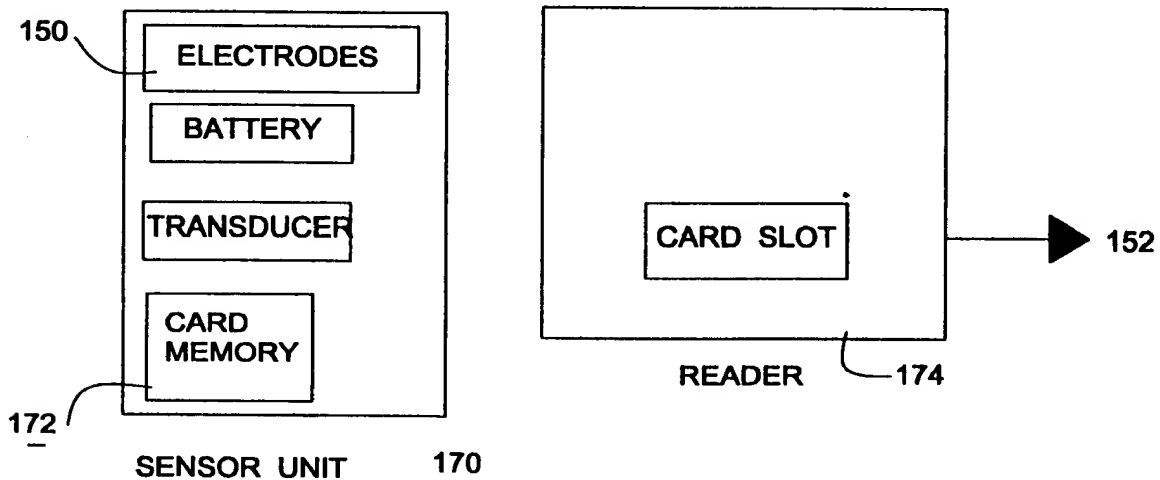
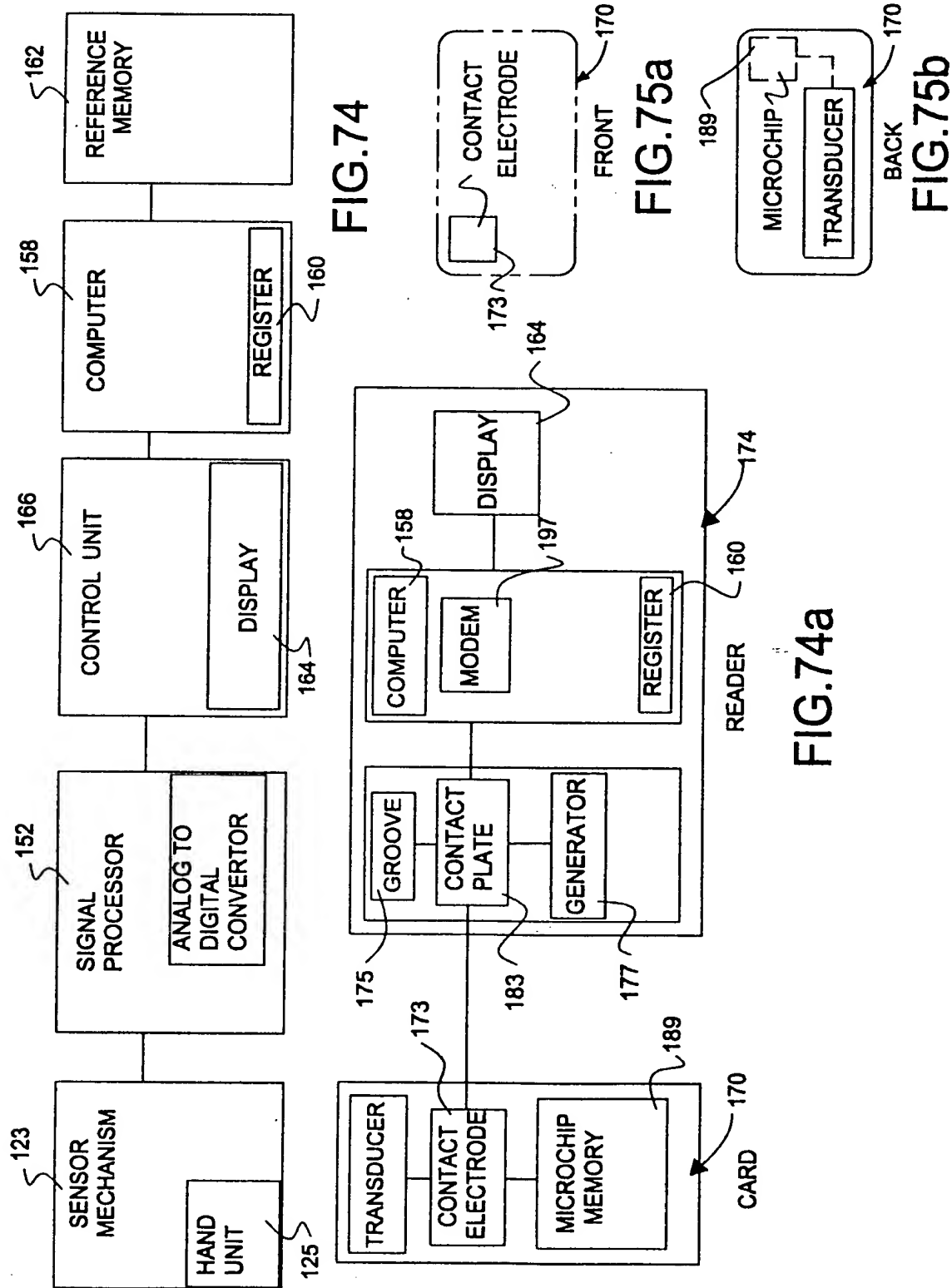


FIG. 73

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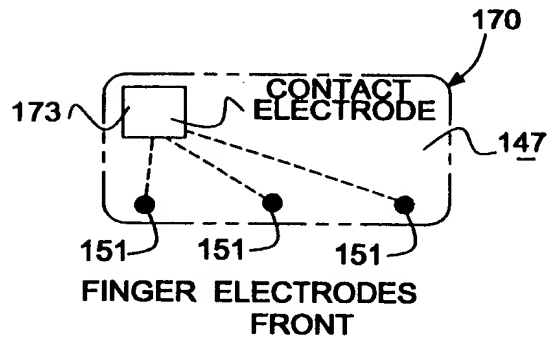


FIG. 75

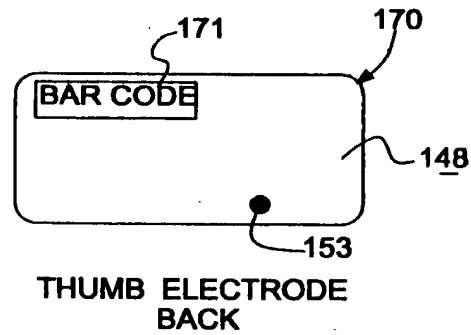


FIG. 76

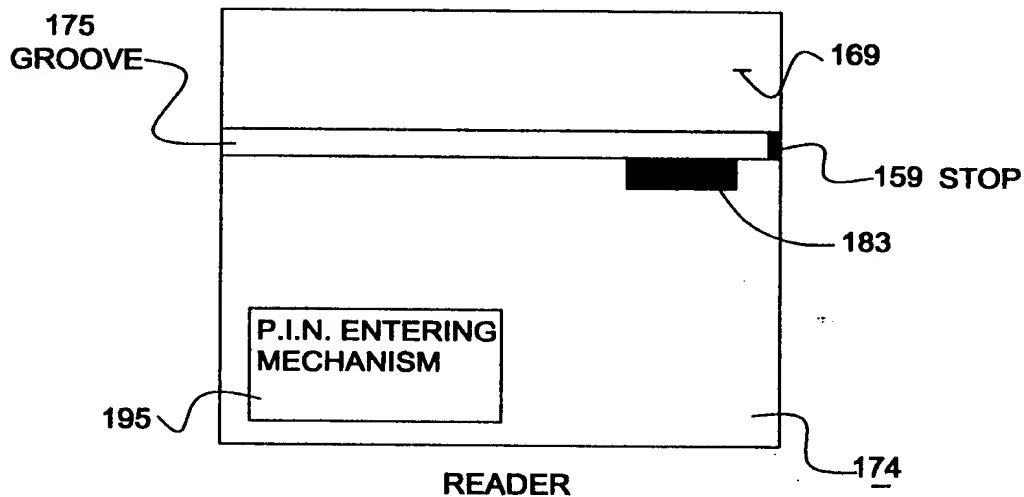


FIG. 77

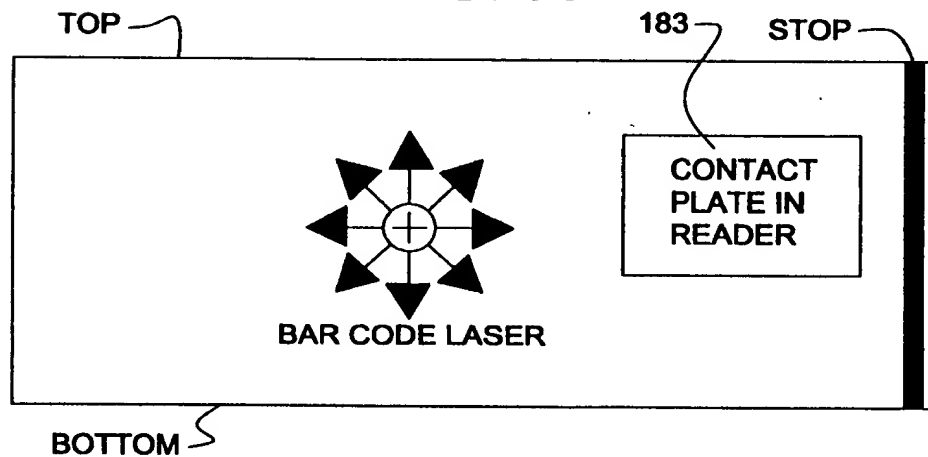


FIG. 78

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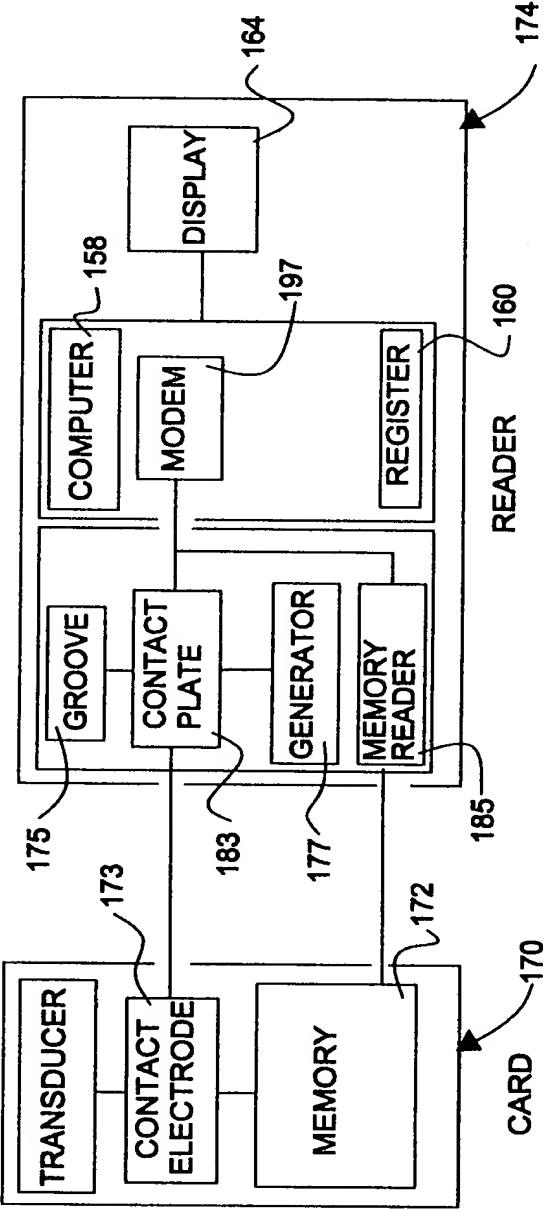


FIG. 77a

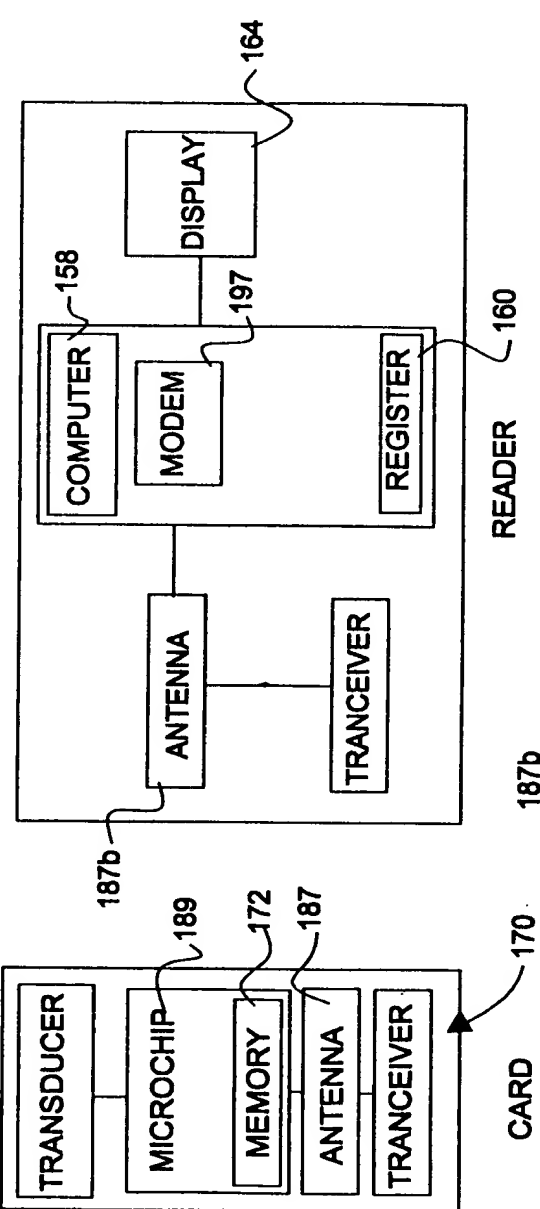


FIG. 78a

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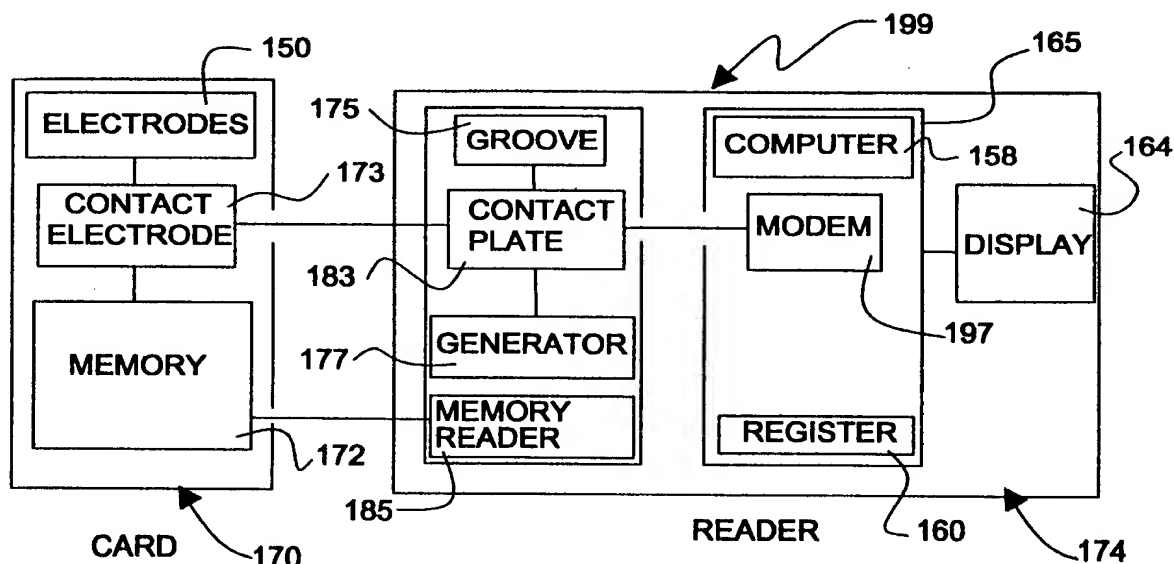


FIG.79

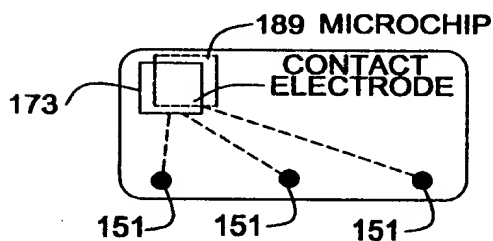


FIG.79a

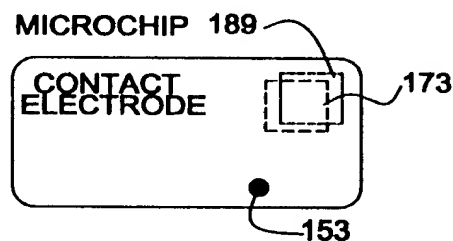


FIG.79b

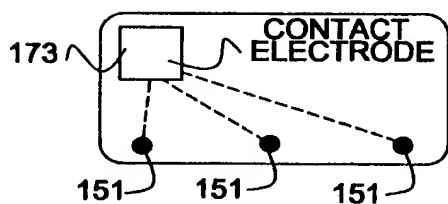


FIG.80

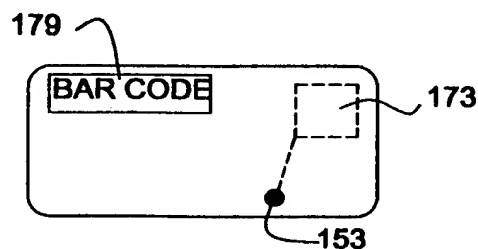


FIG.81

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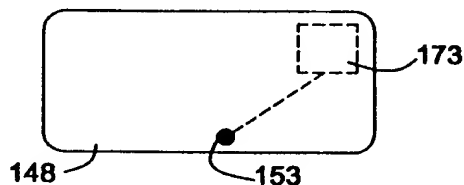
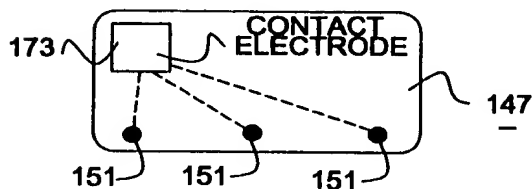


FIG.82

FIG.83

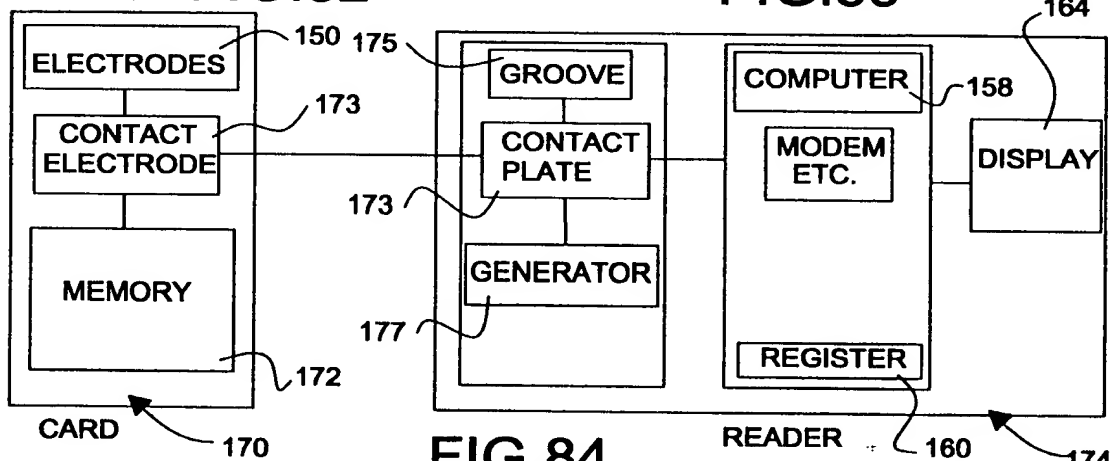


FIG.84

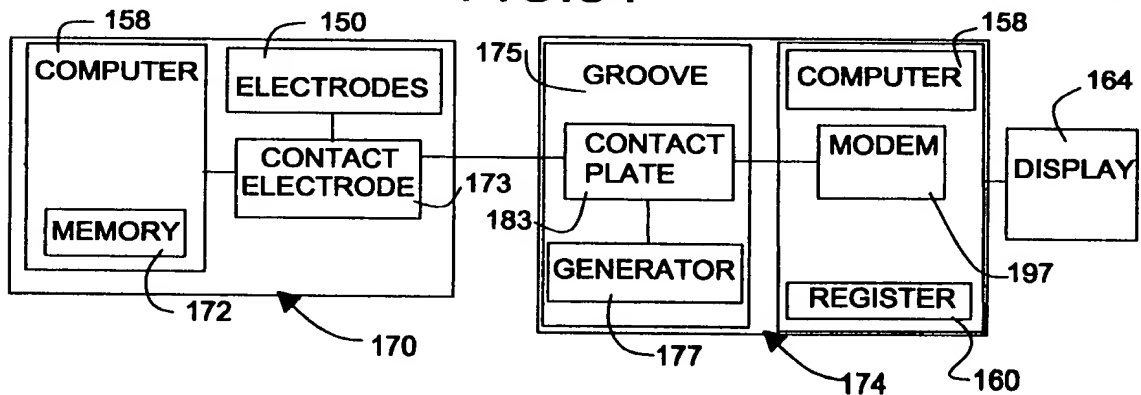


FIG.85

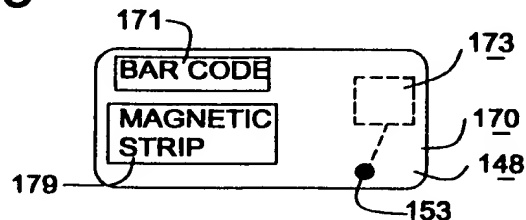
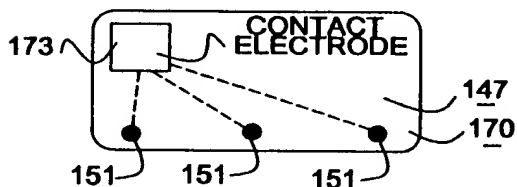


FIG.86

FIG.87

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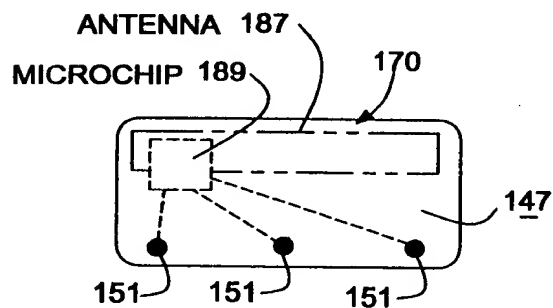


FIG. 88

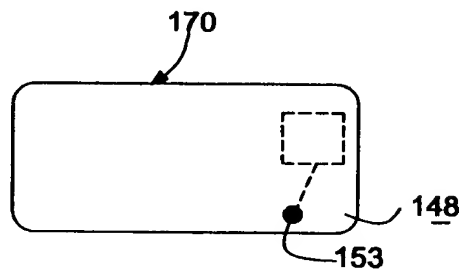


FIG. 89

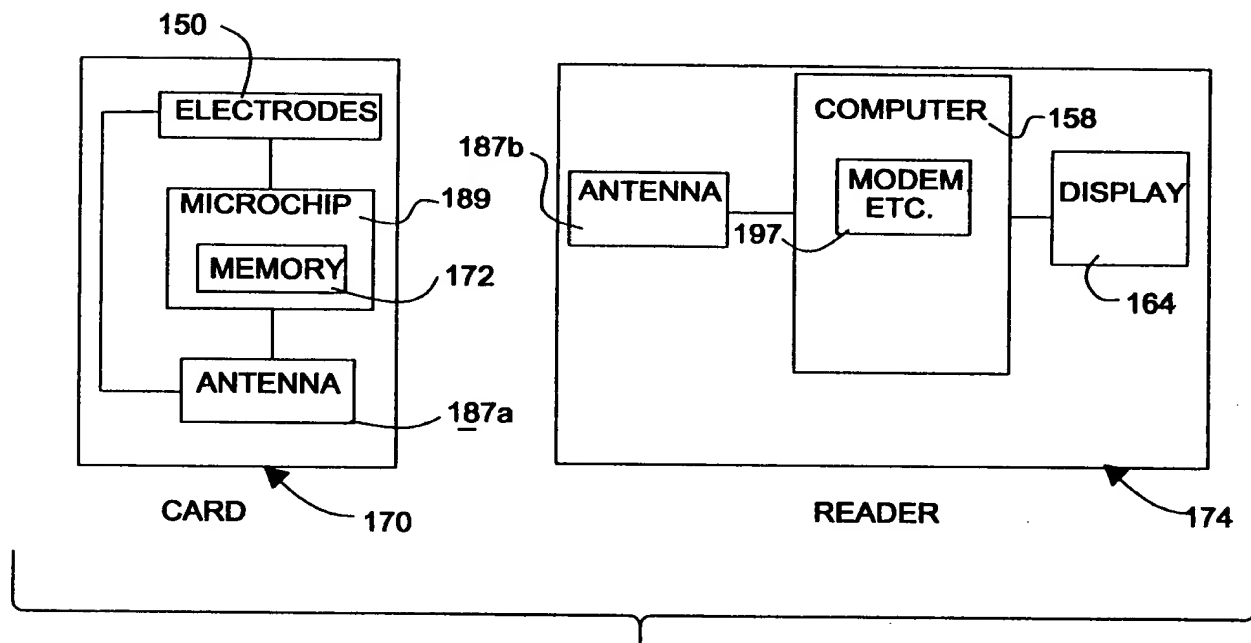


FIG. 90

FIG.91

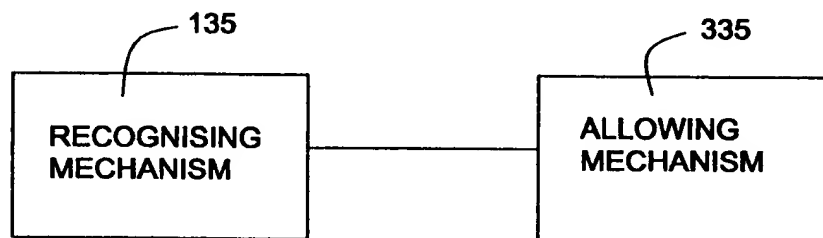


FIG.92a

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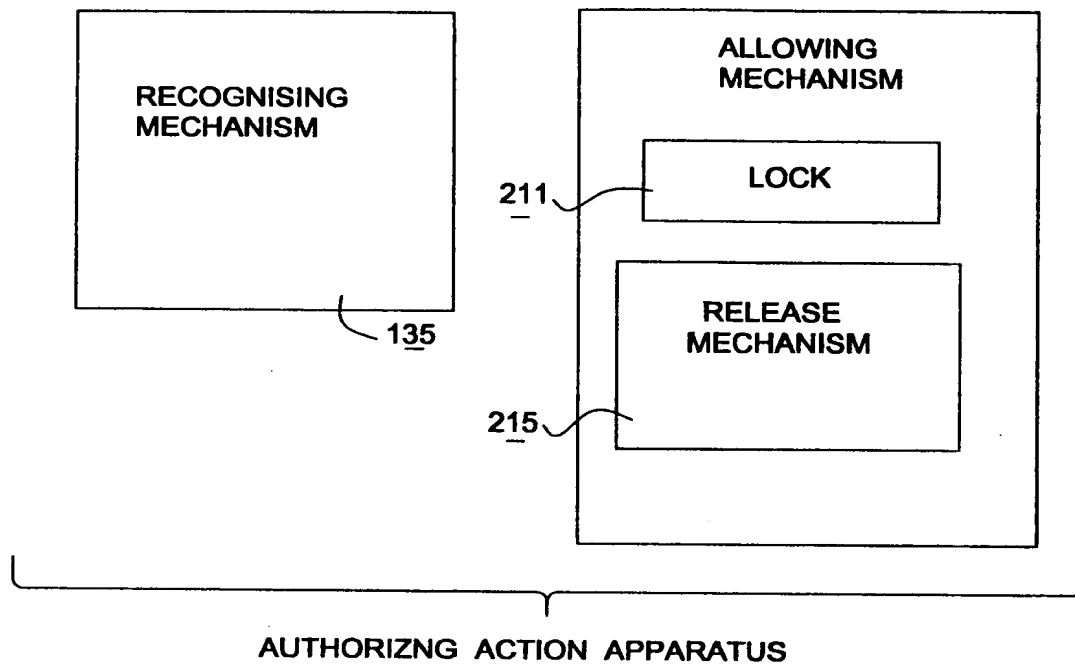


FIG.92

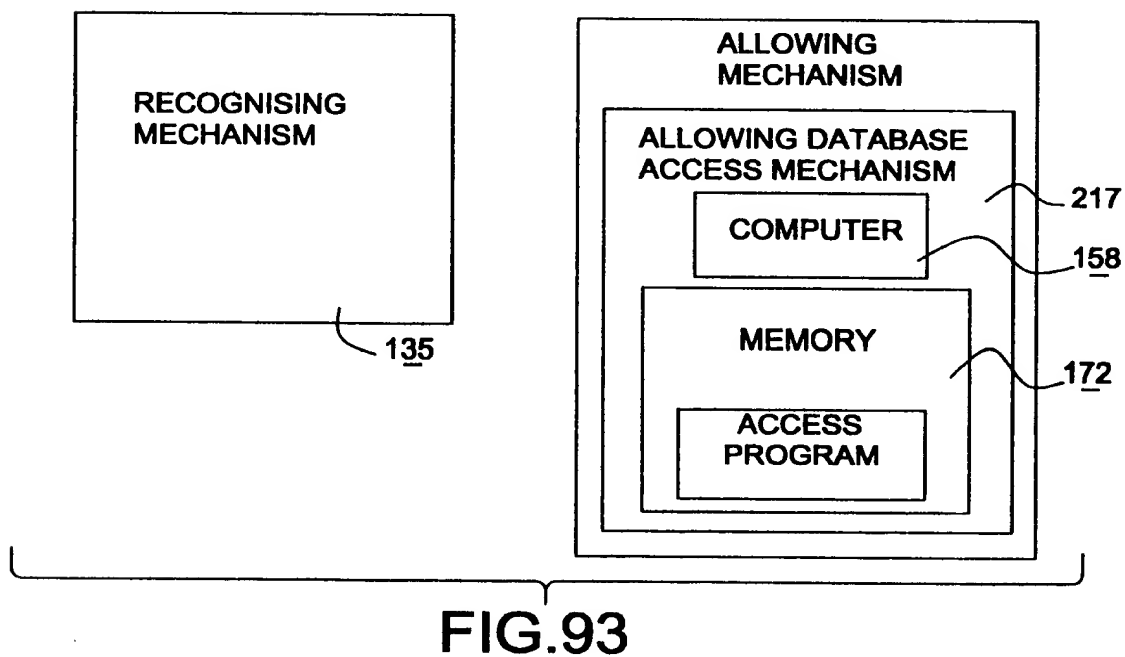


FIG.93

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FIG.94

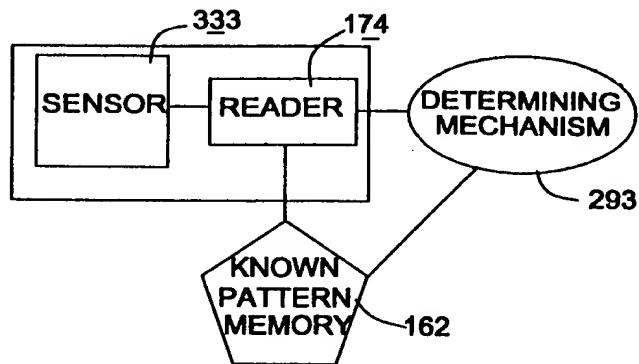


FIG.95

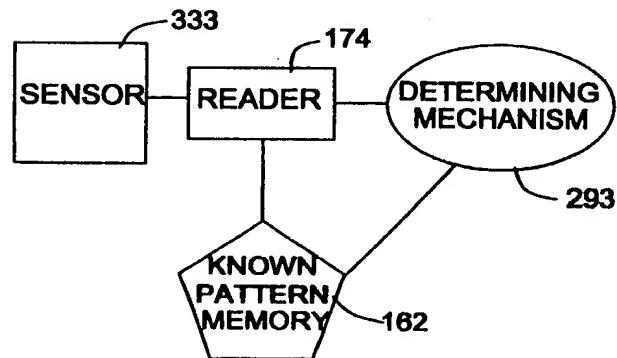


FIG.96

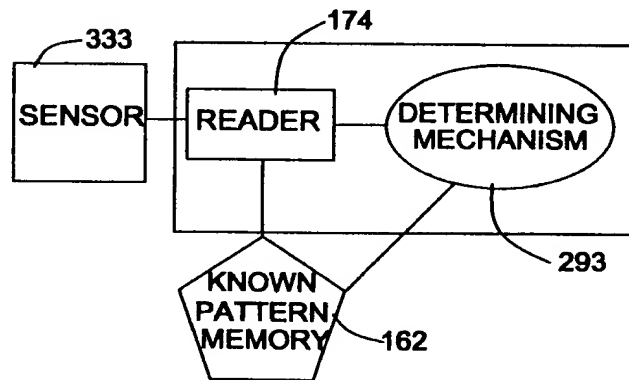
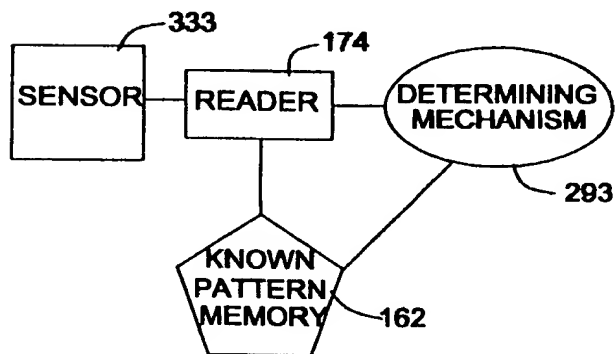


FIG.97



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FIG.98

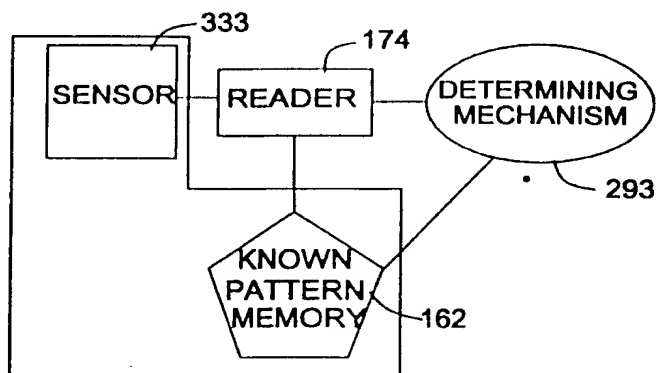


FIG.99

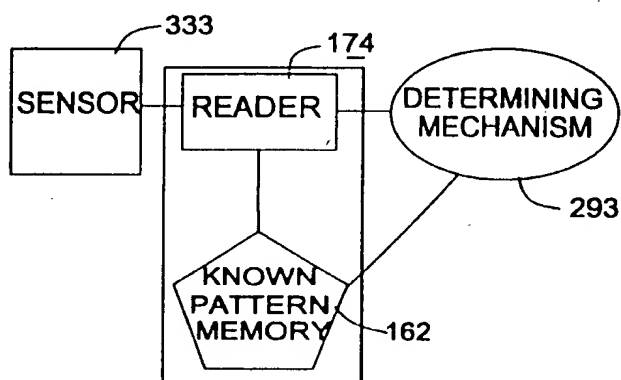


FIG. 100

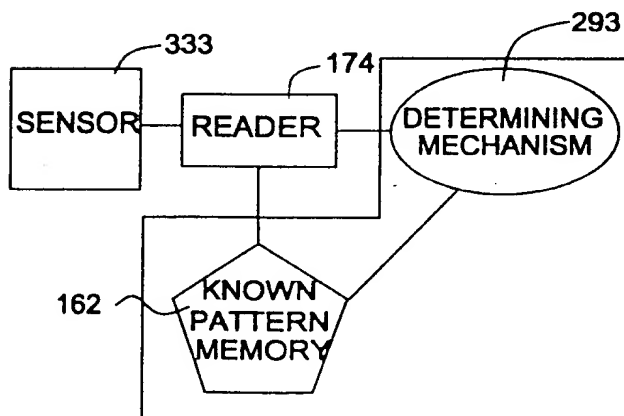
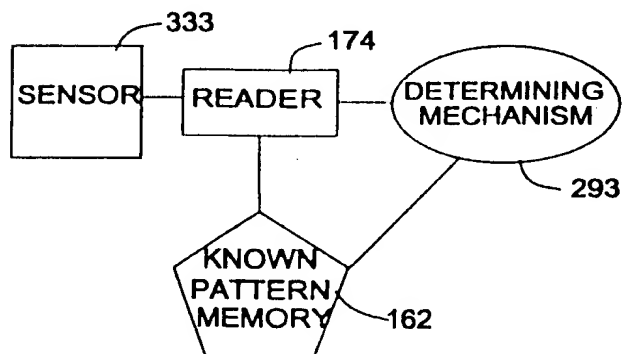


FIG.101



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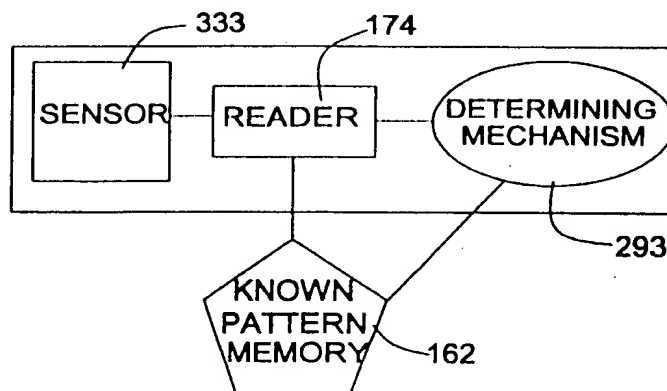


FIG.102

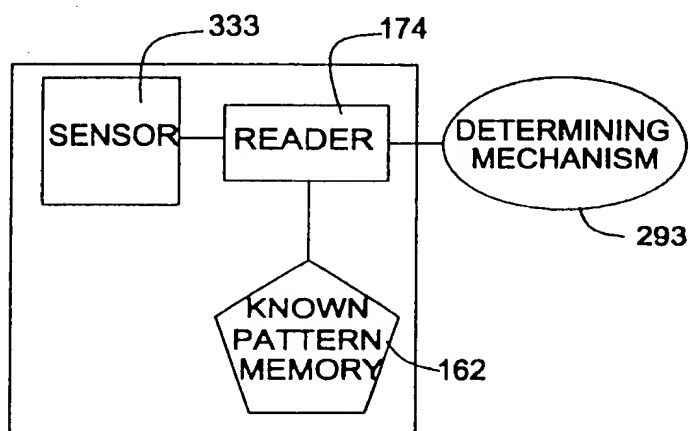


FIG.103

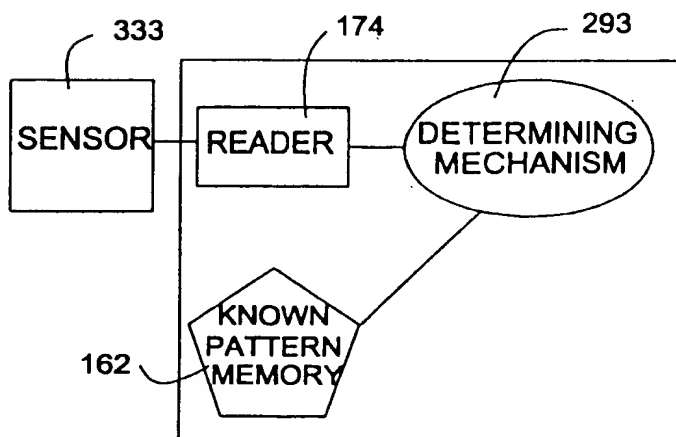


FIG.104

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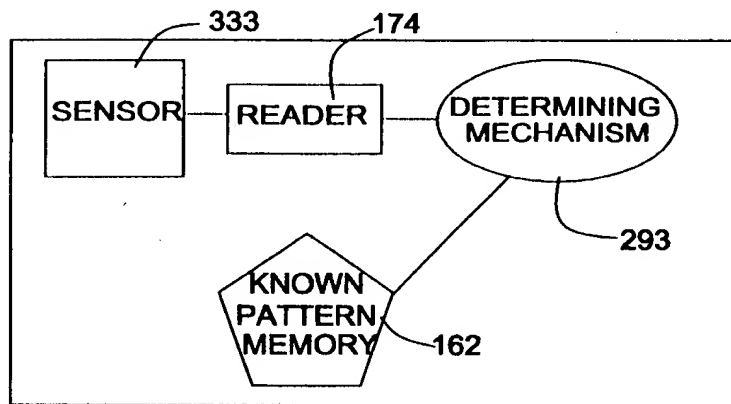


FIG. 105

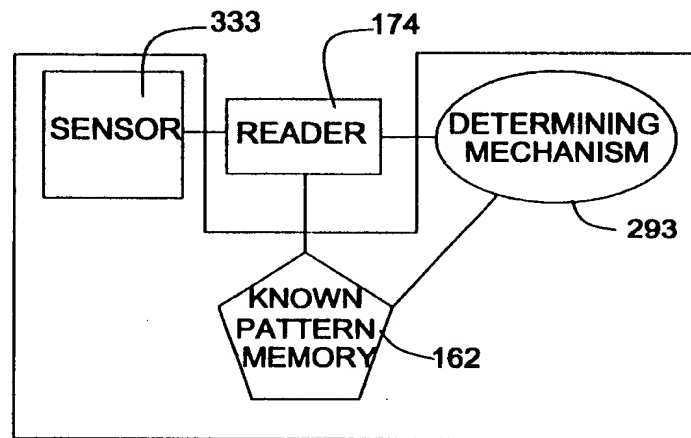


FIG. 106

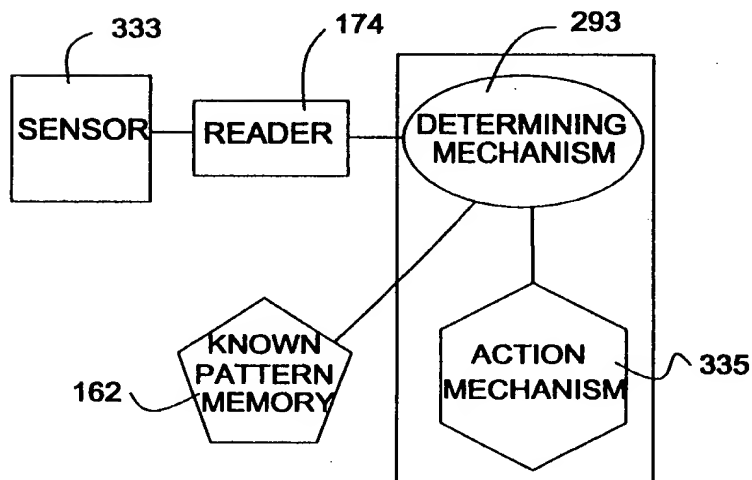


FIG. 107

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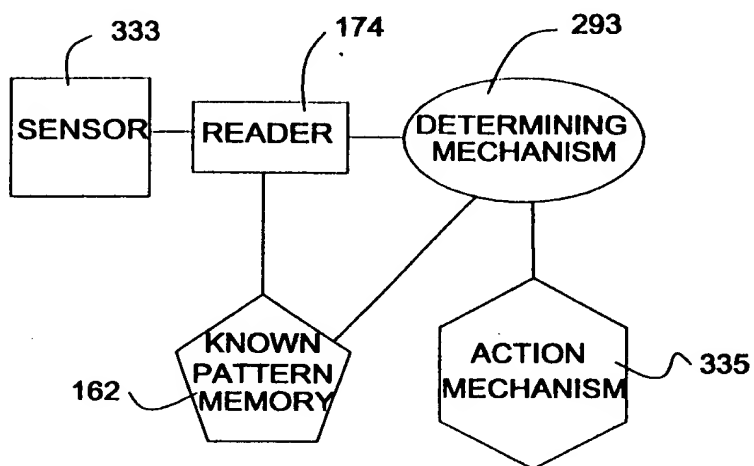


FIG.108

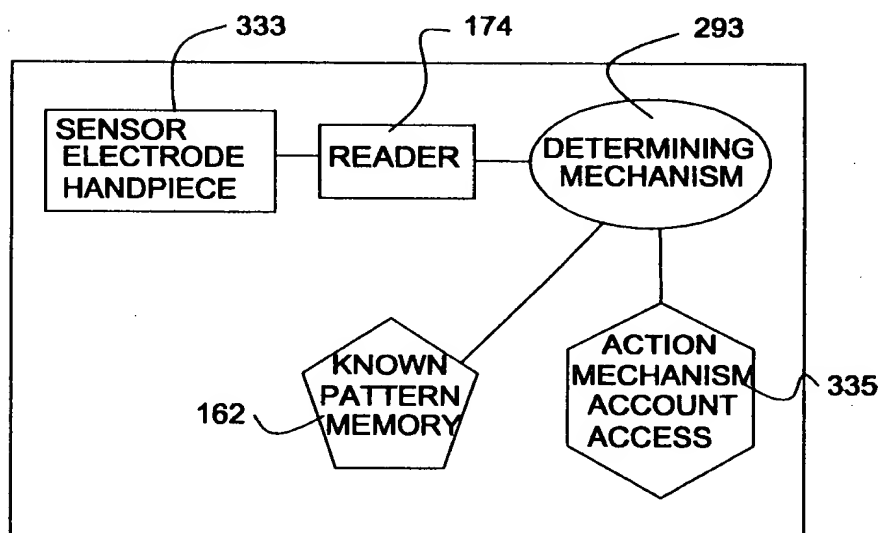


FIG.109

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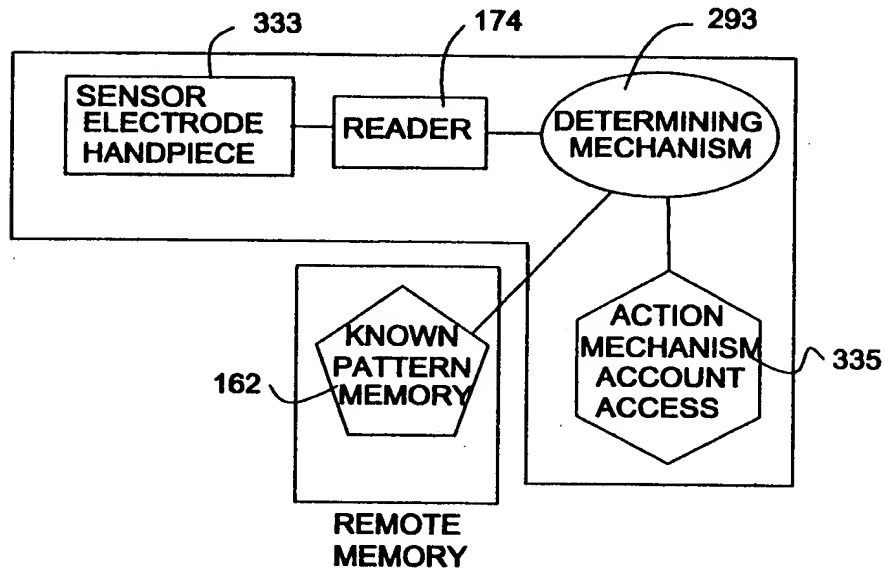


FIG.110

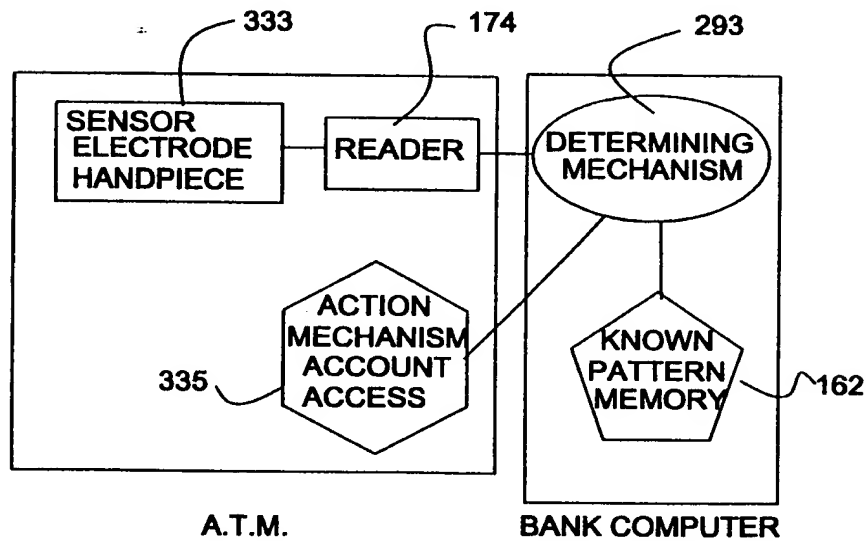


FIG.111

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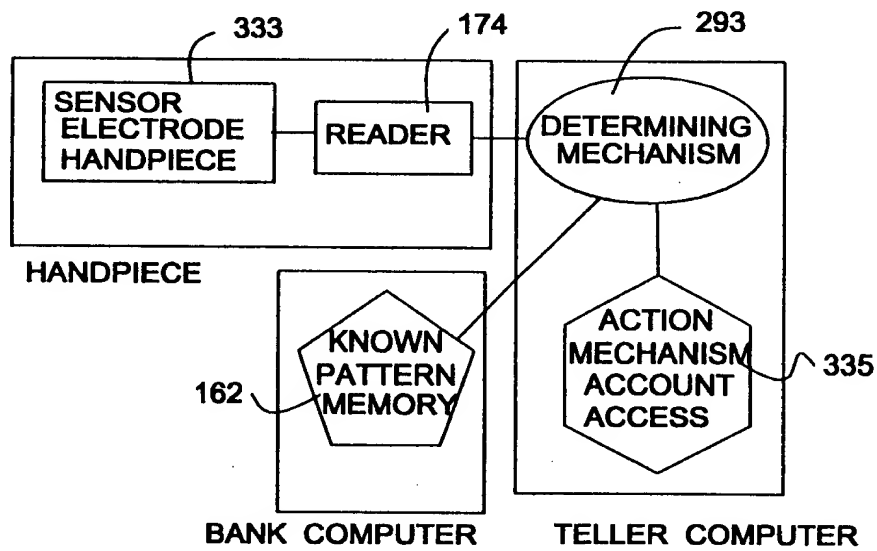


FIG. 112

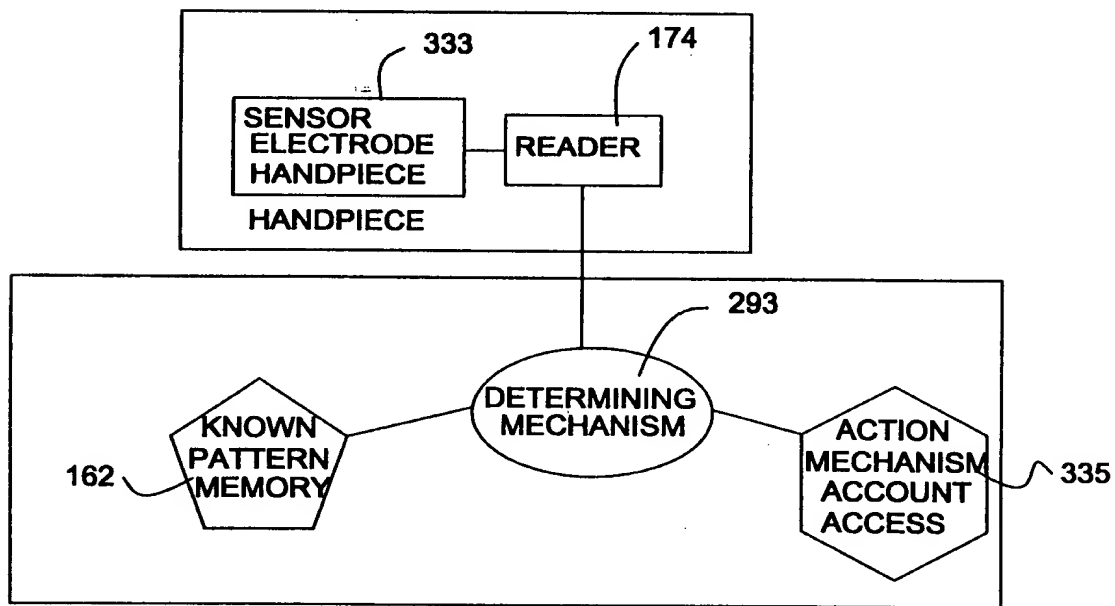


FIG. 113

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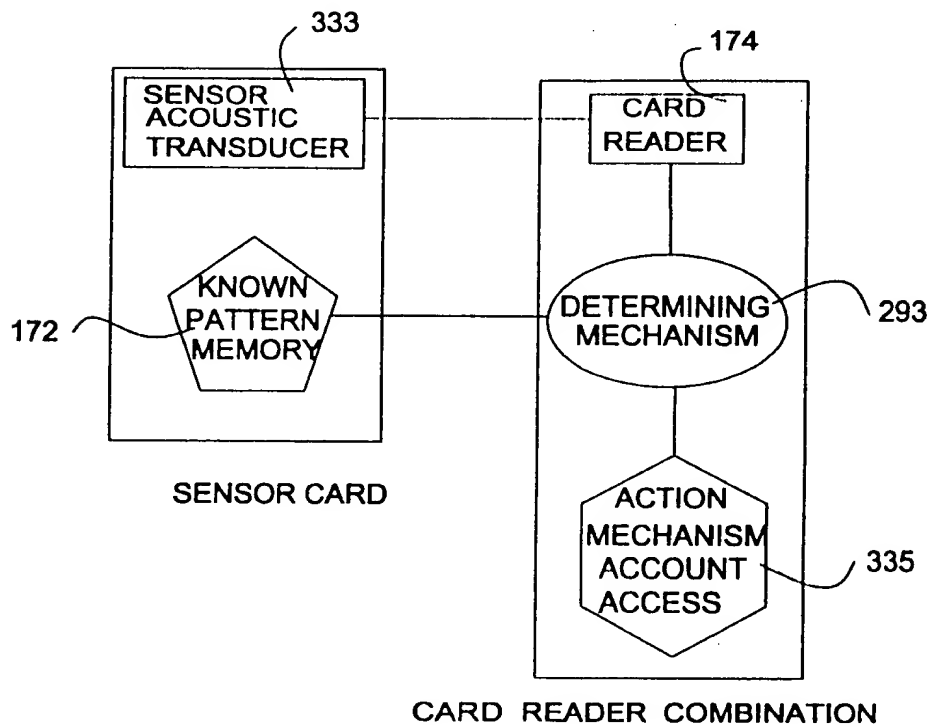


FIG.114

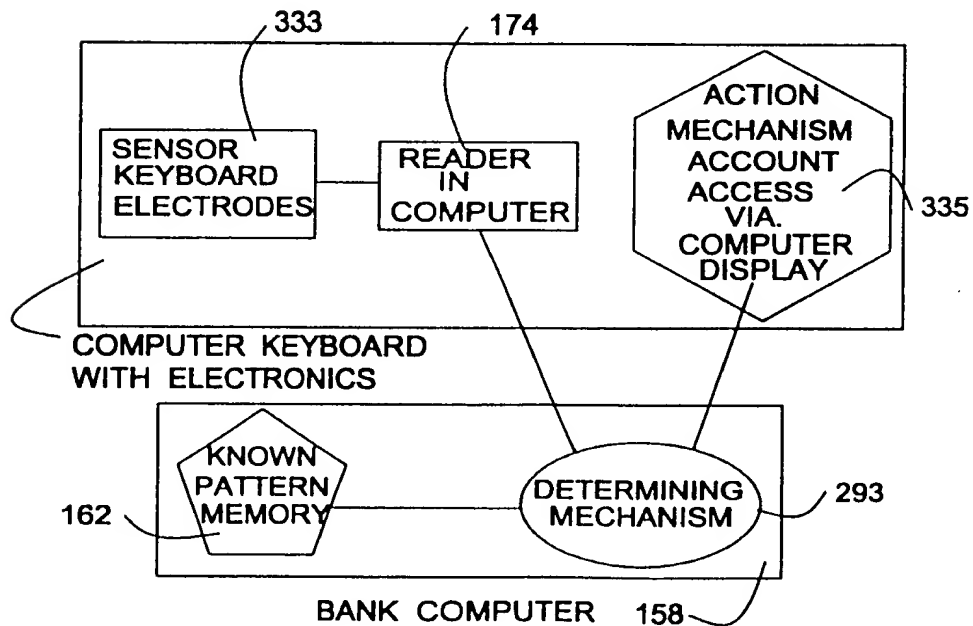


FIG.115

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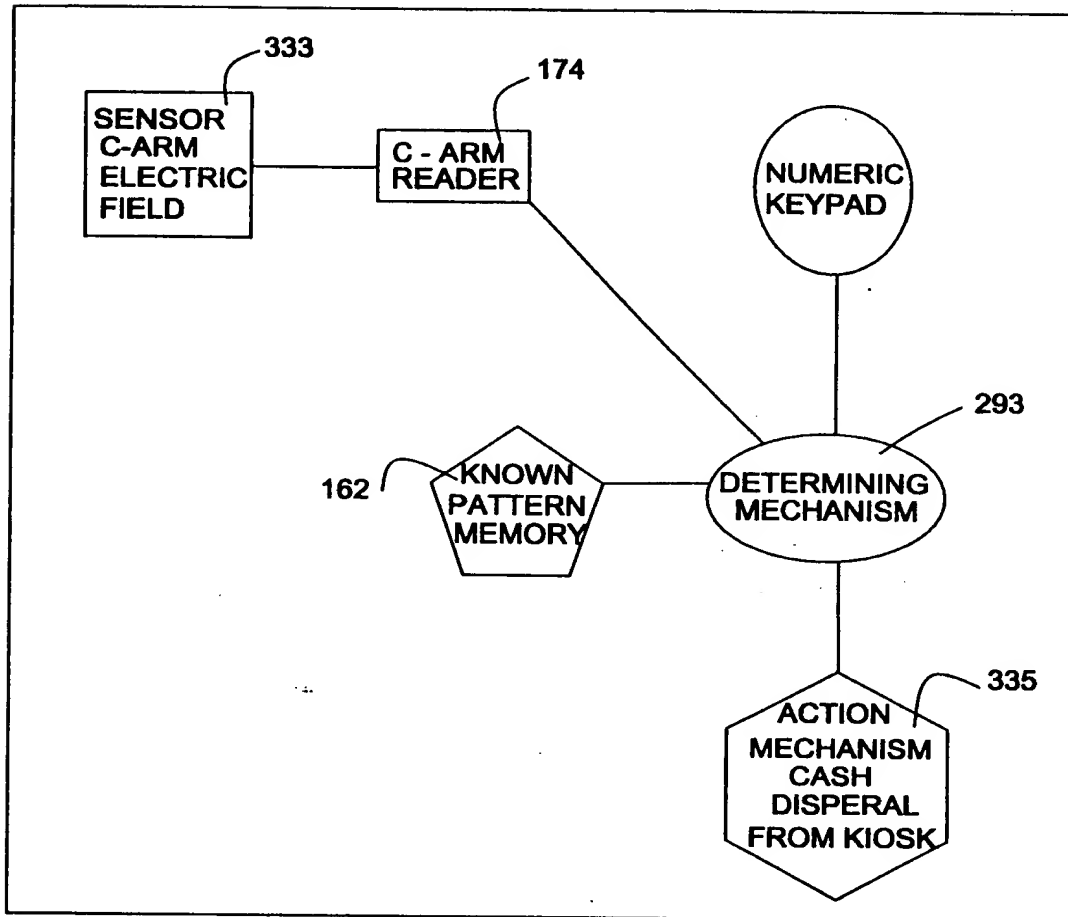


FIG.116

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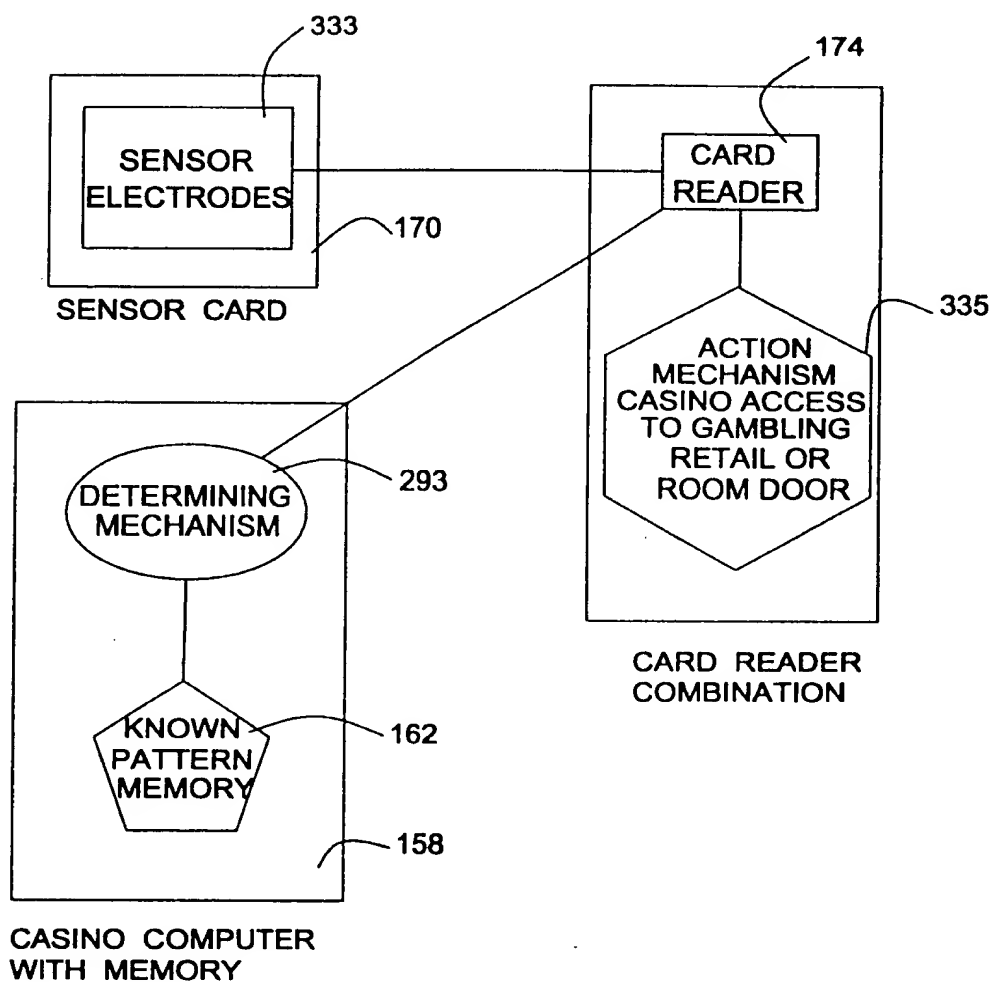


FIG.117

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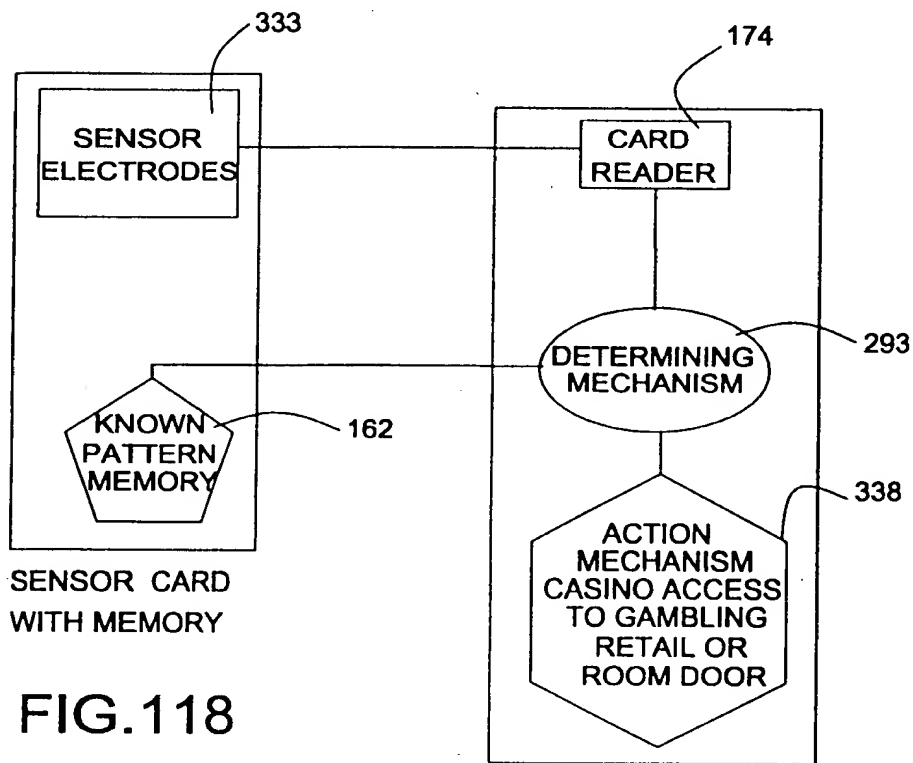


FIG. 118

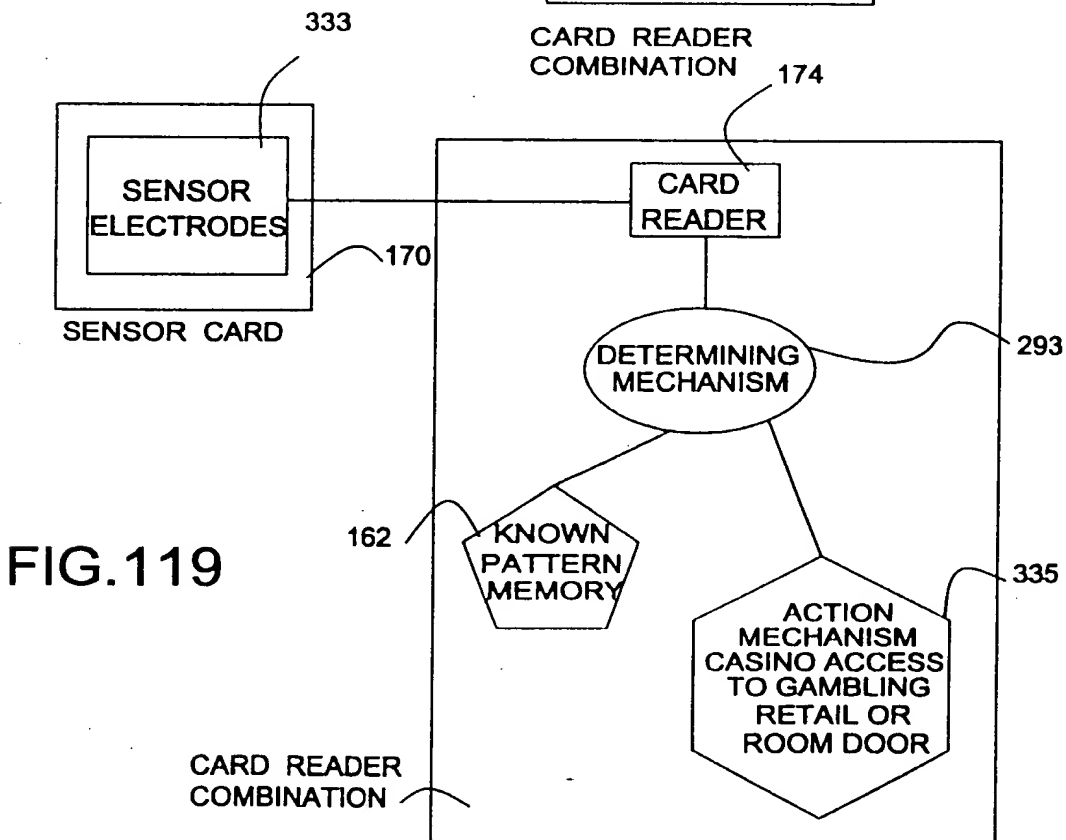


FIG. 119

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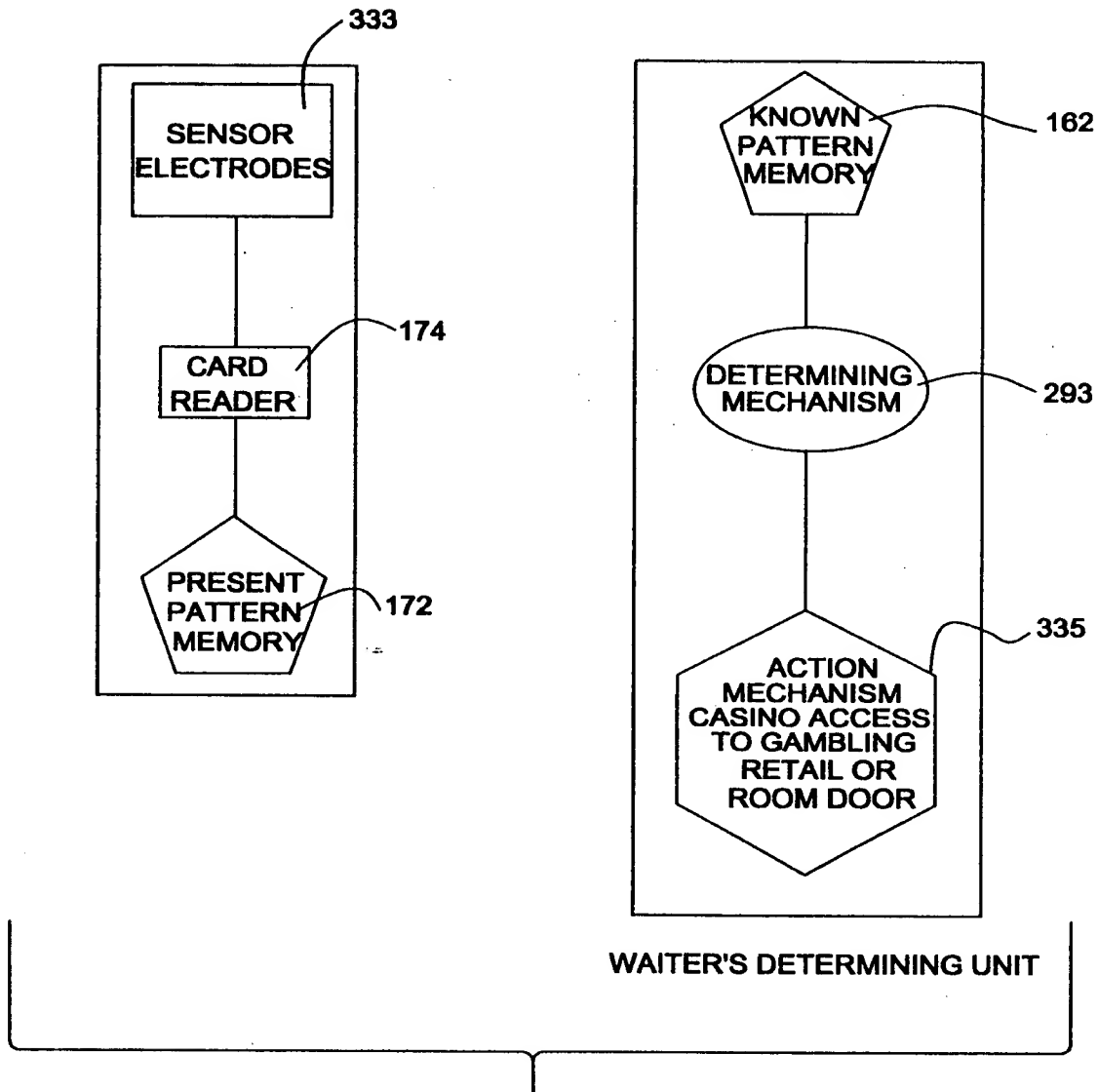


FIG.120

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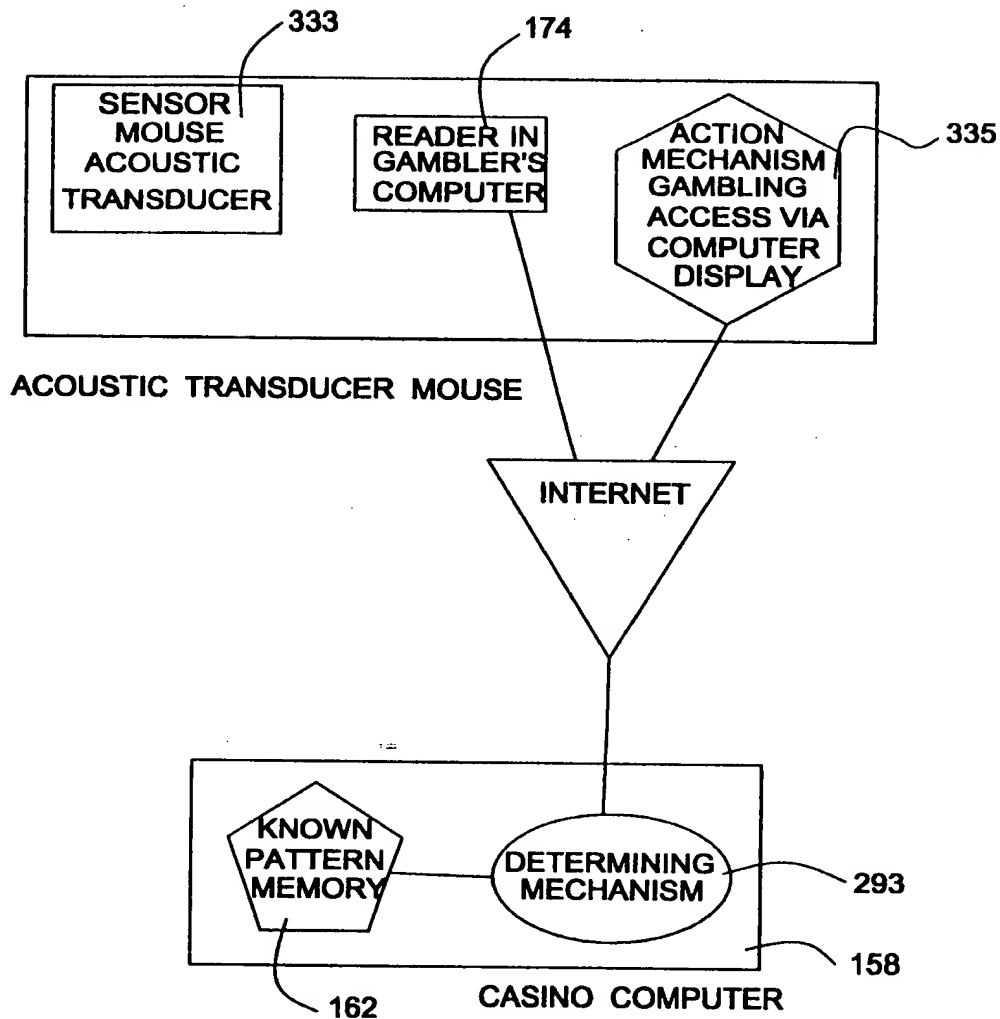


FIG.121

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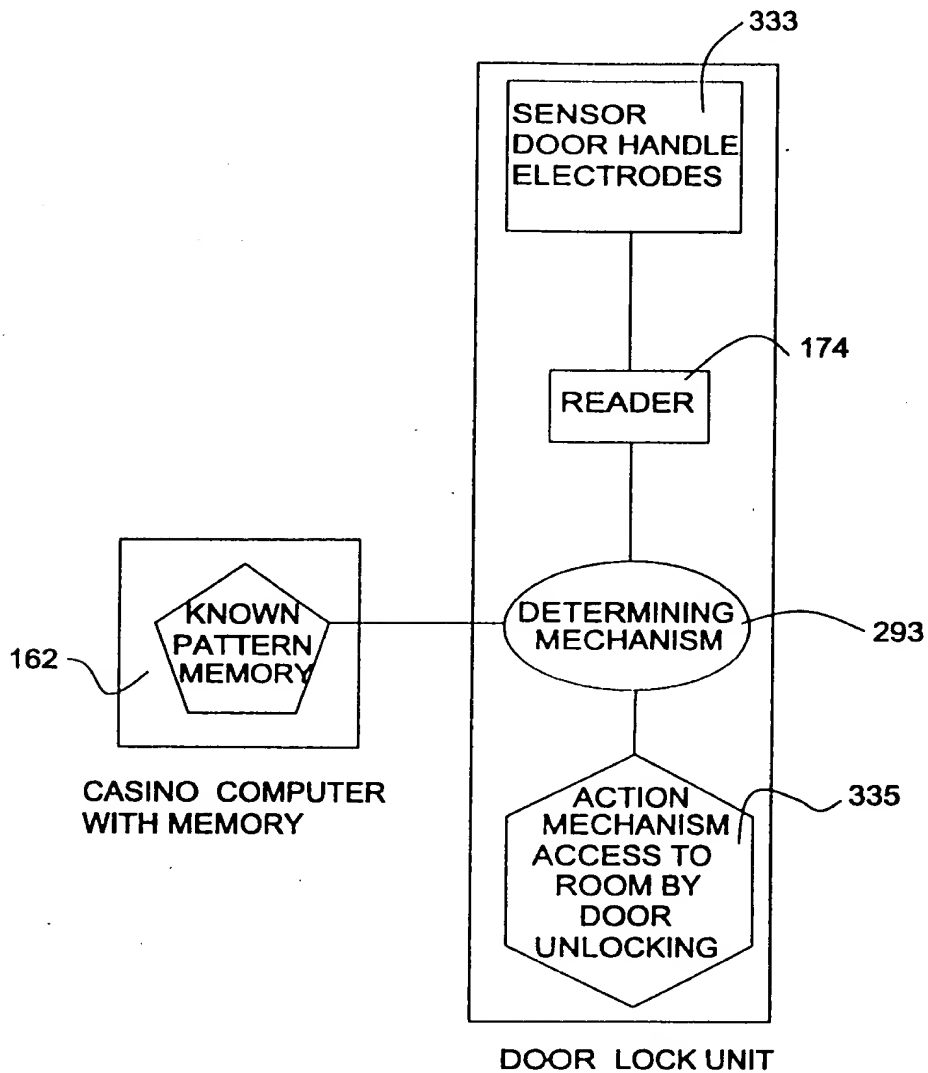


FIG.122

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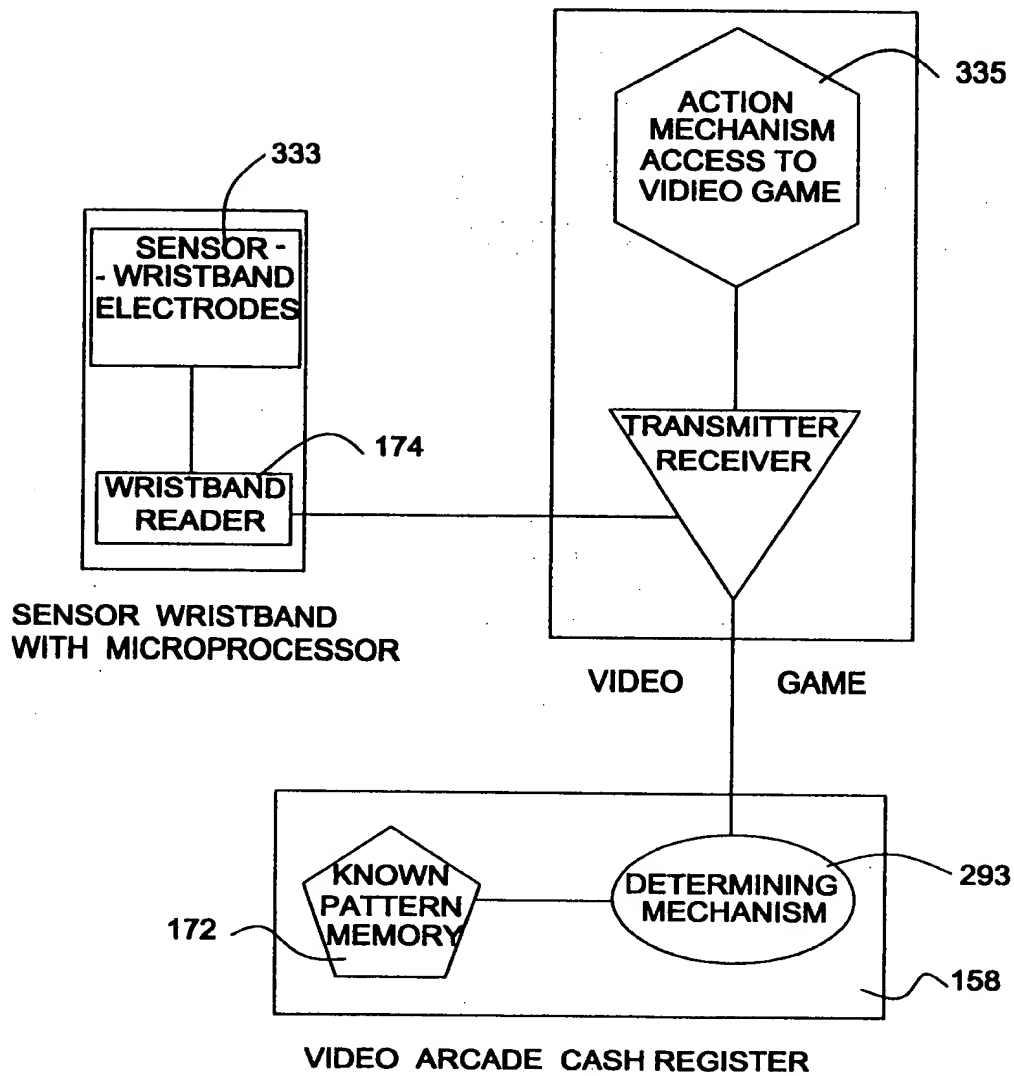


FIG.123

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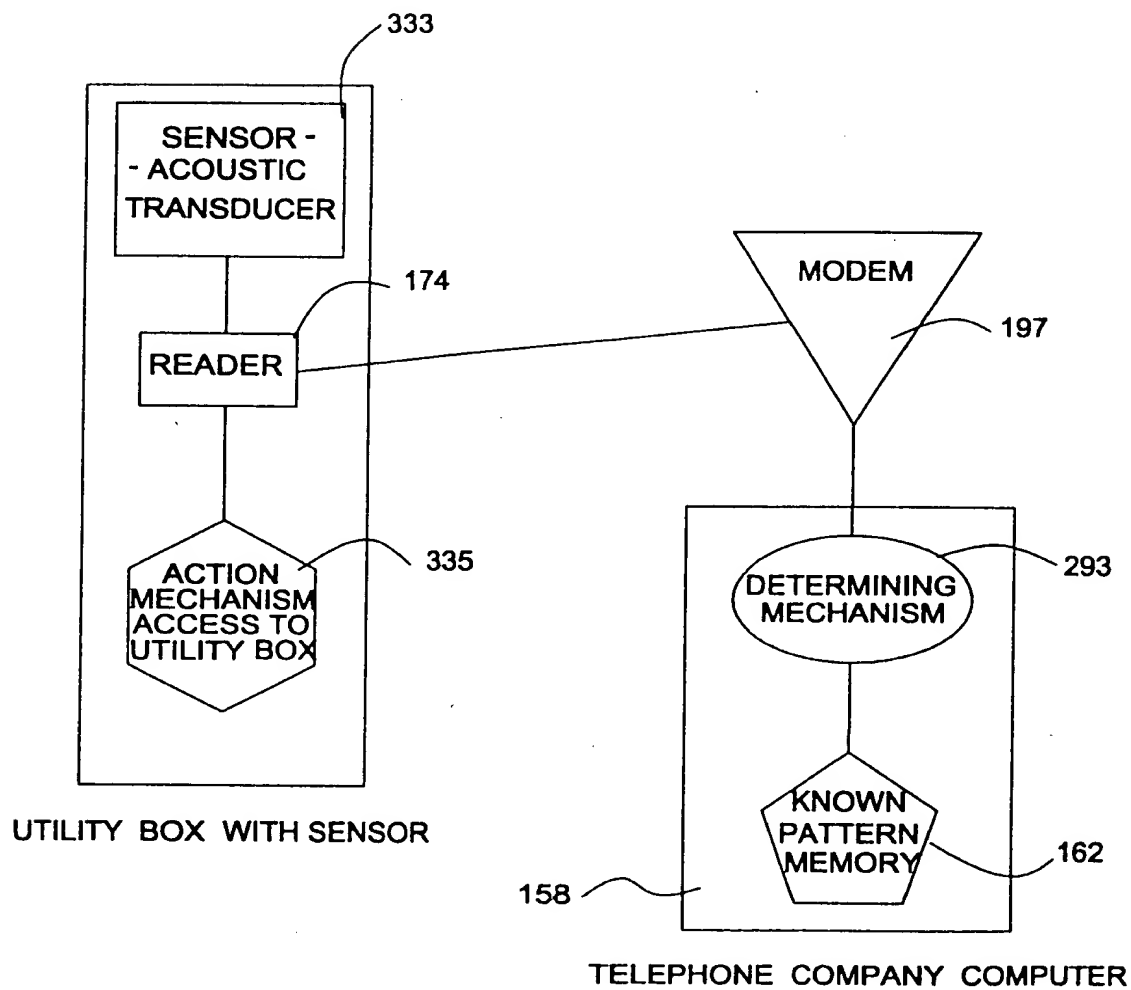


FIG.124

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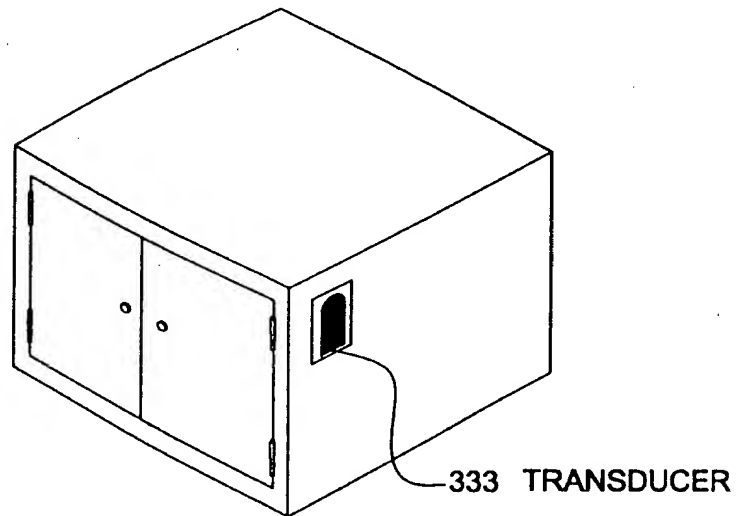


FIG.124a

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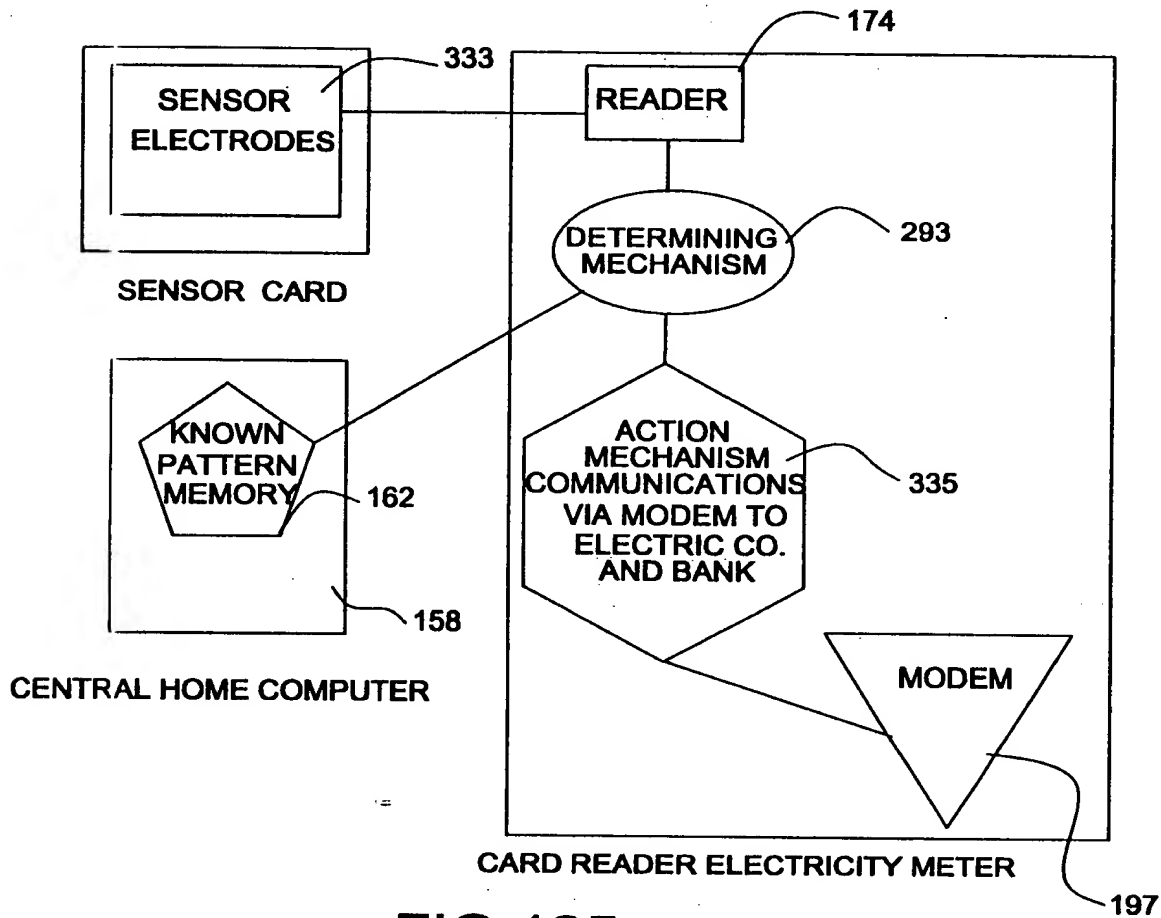


FIG.125

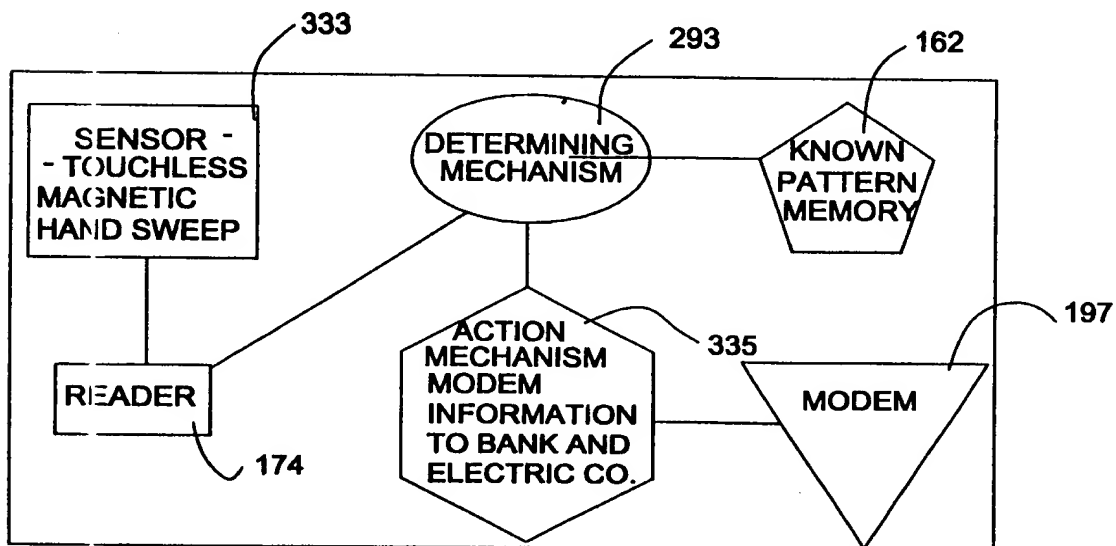


FIG.126

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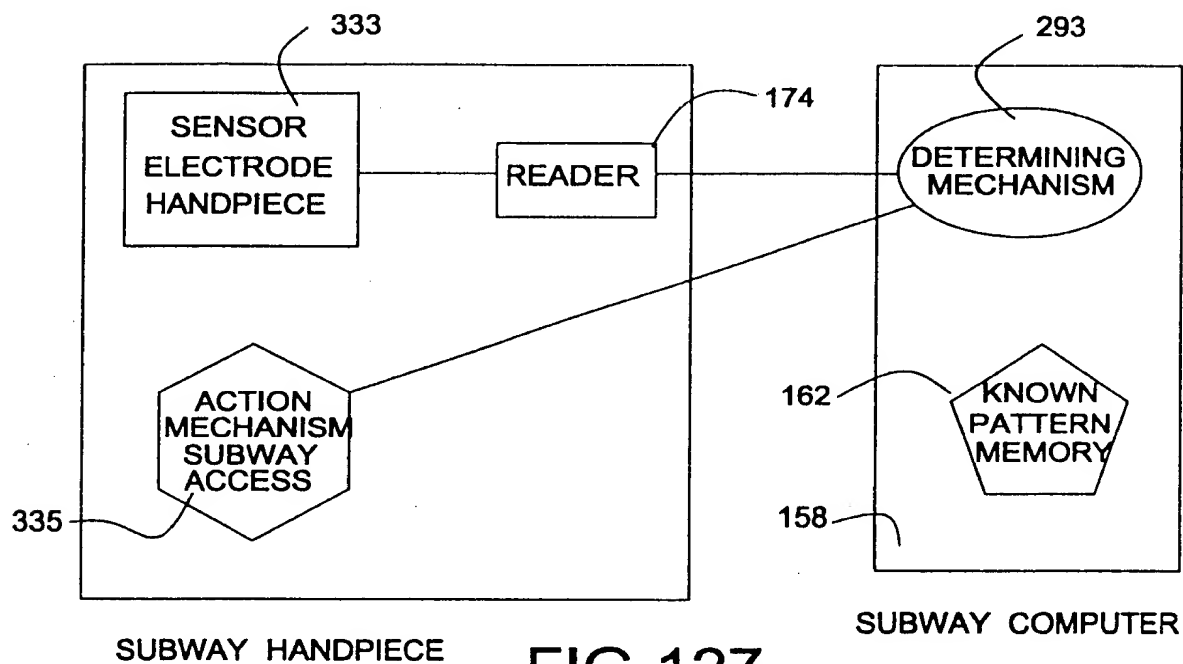


FIG. 127

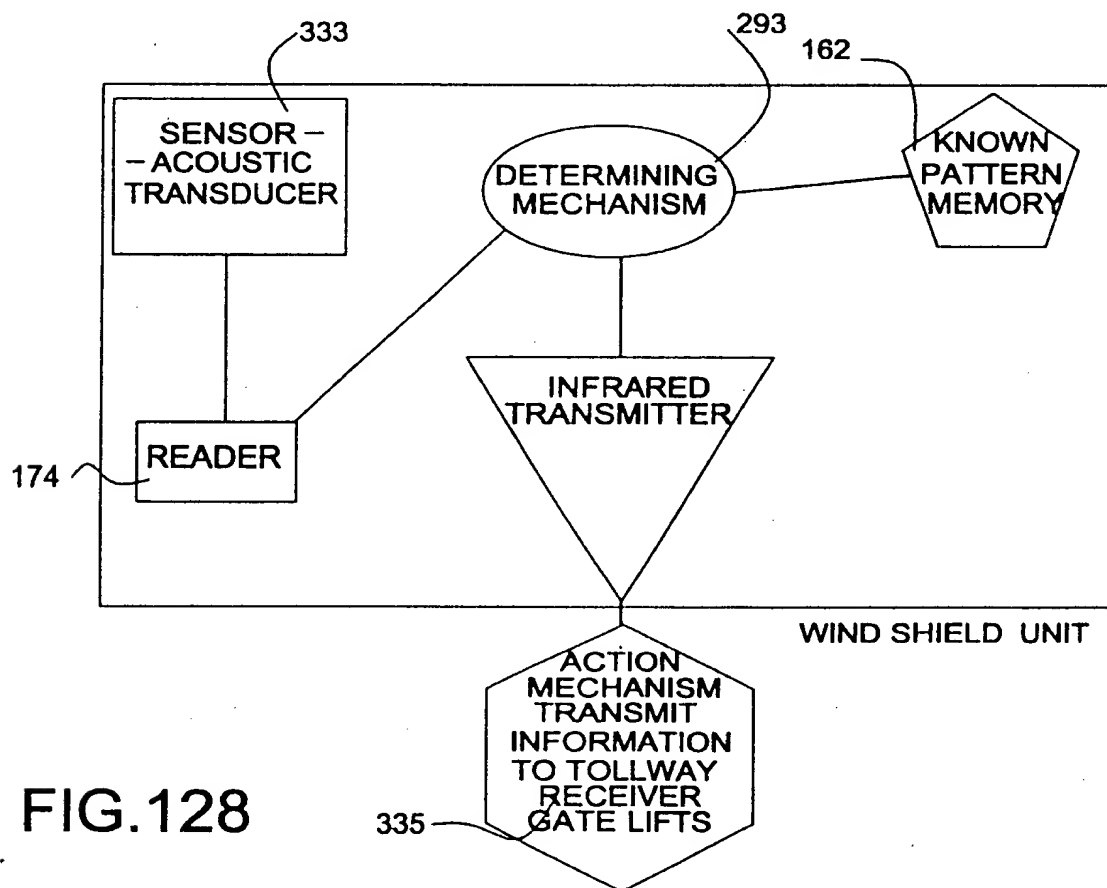


FIG. 128

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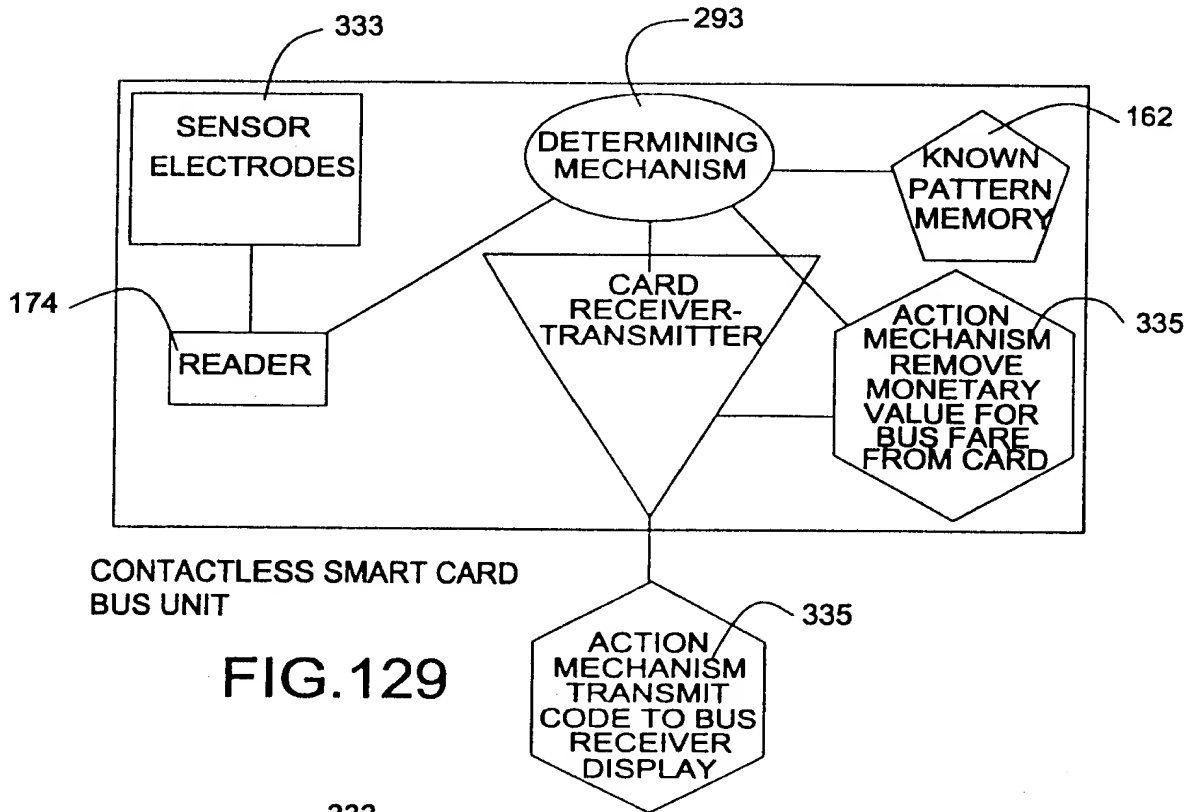


FIG. 129

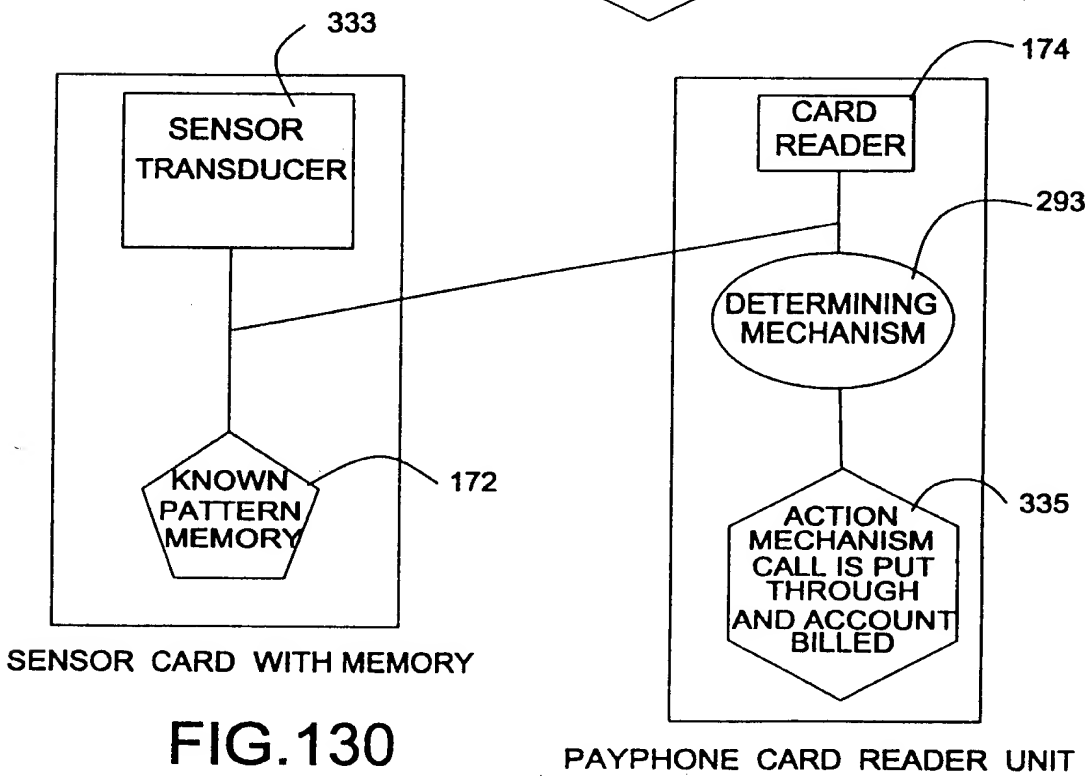


FIG. 130

PAYPHONE CARD READER UNIT

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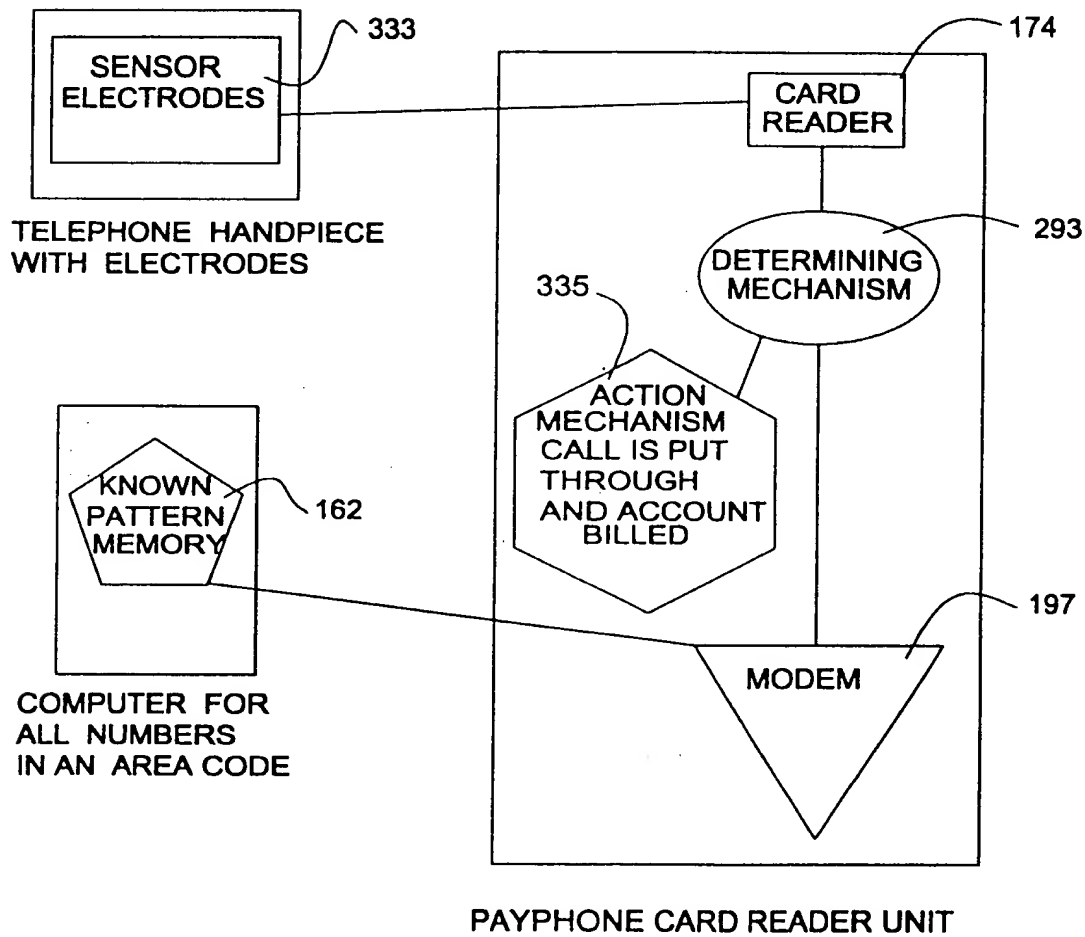
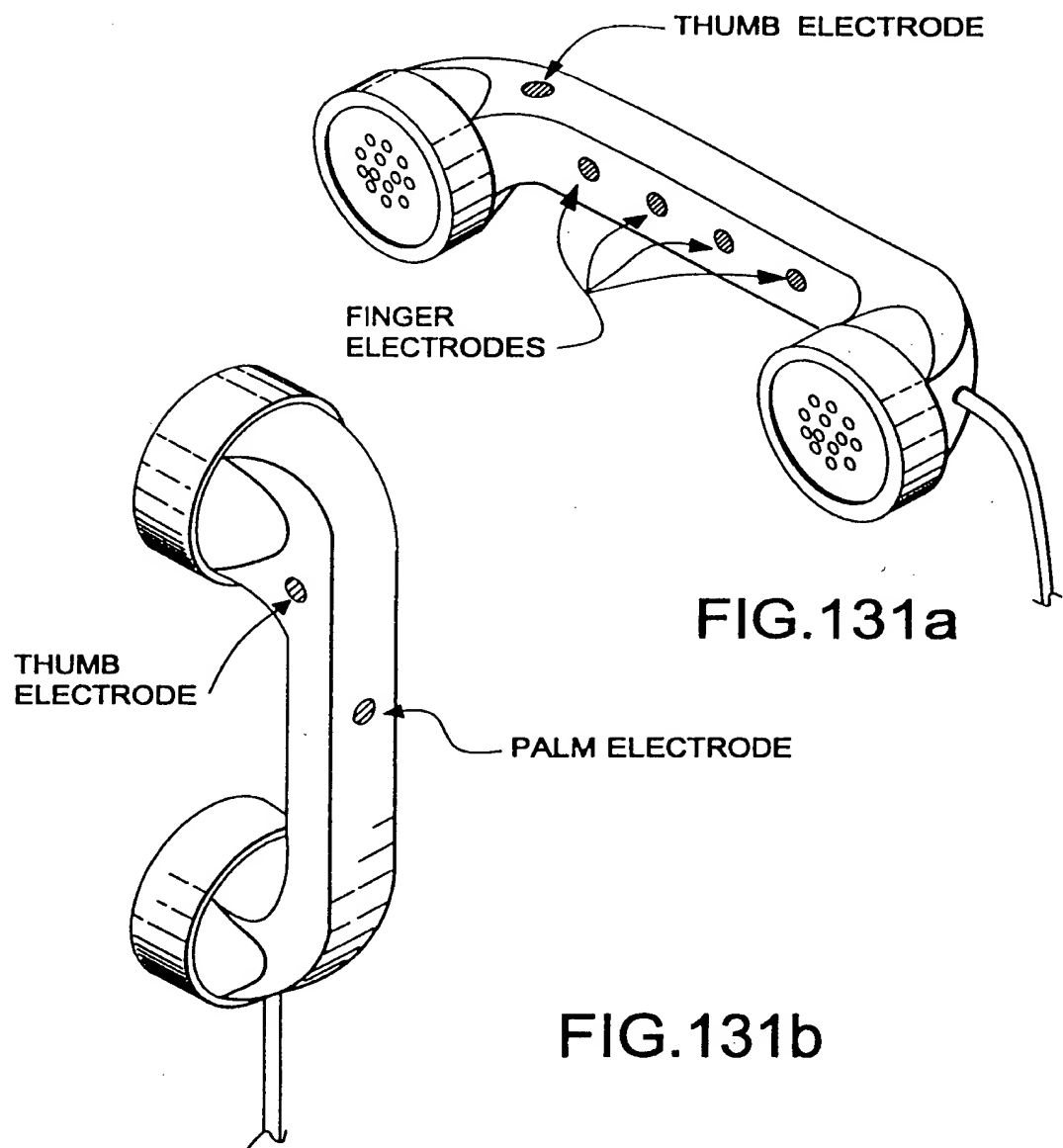


FIG.131

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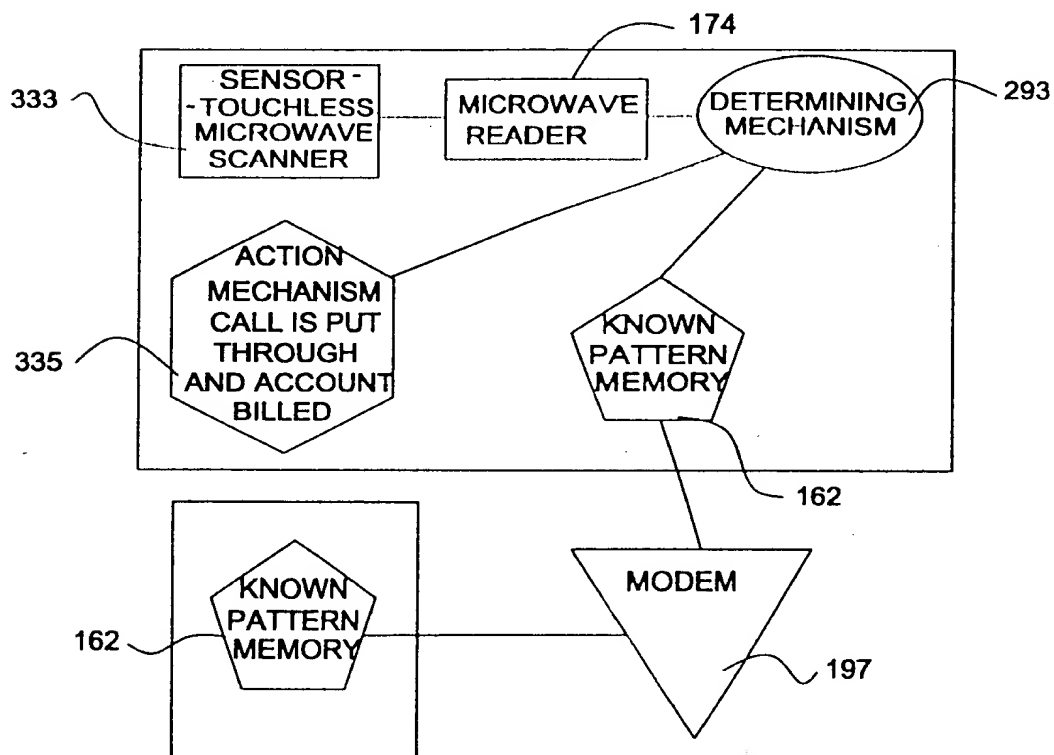
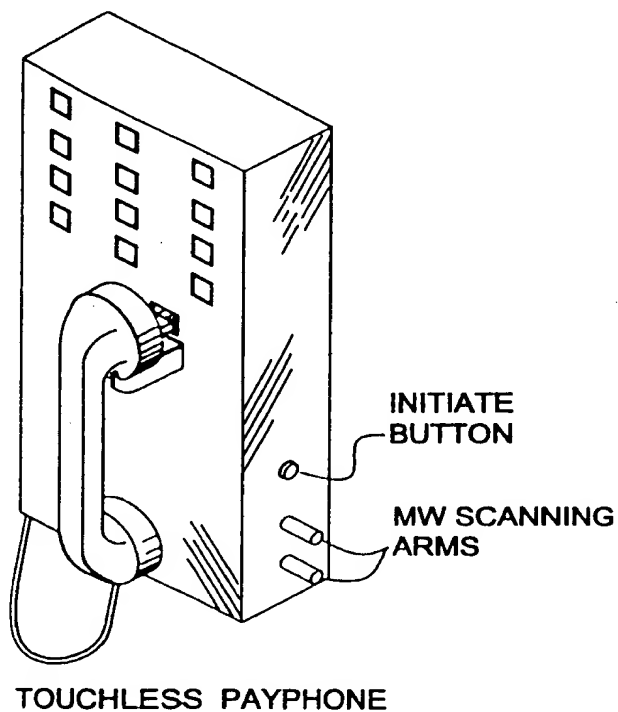


FIG.132

FIG.132a



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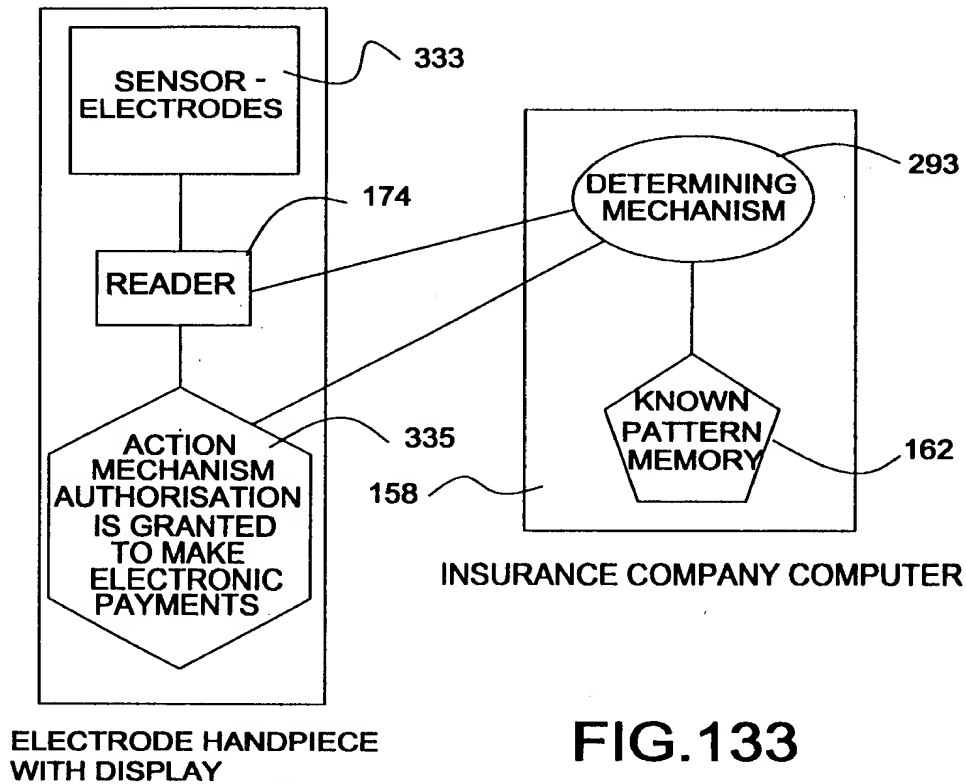


FIG. 133

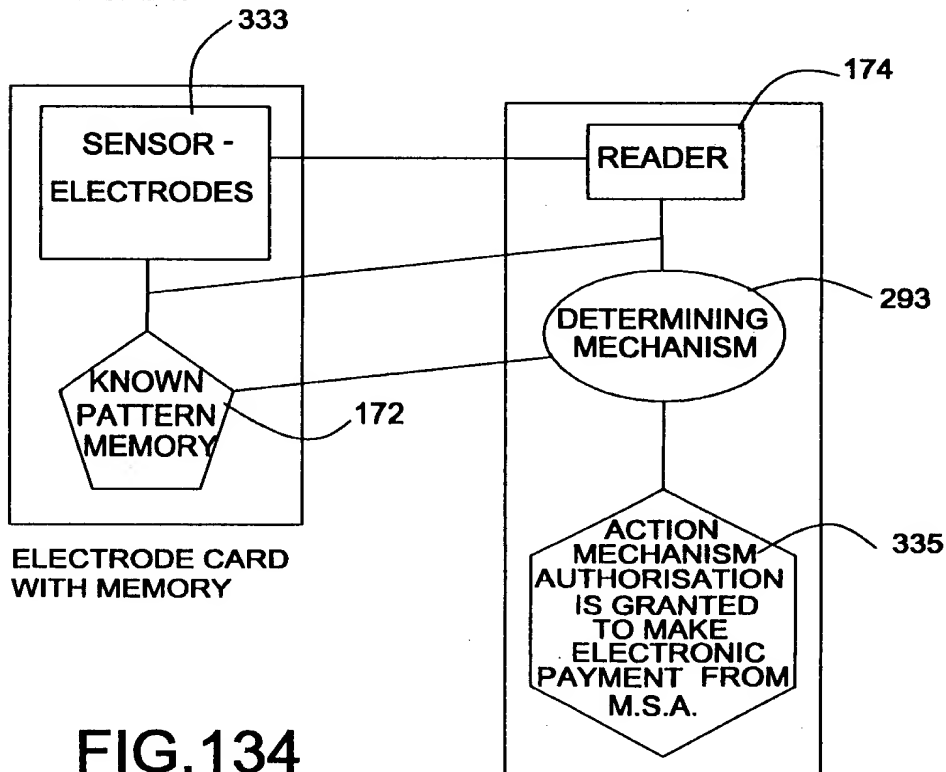


FIG. 134

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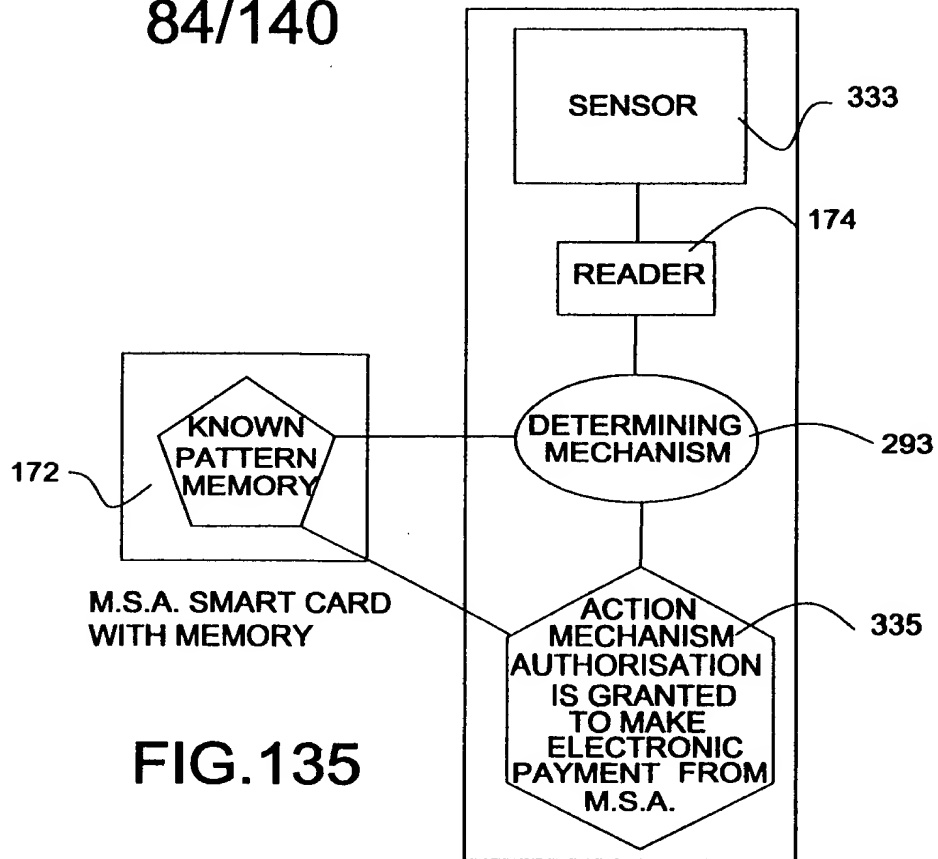


FIG. 135

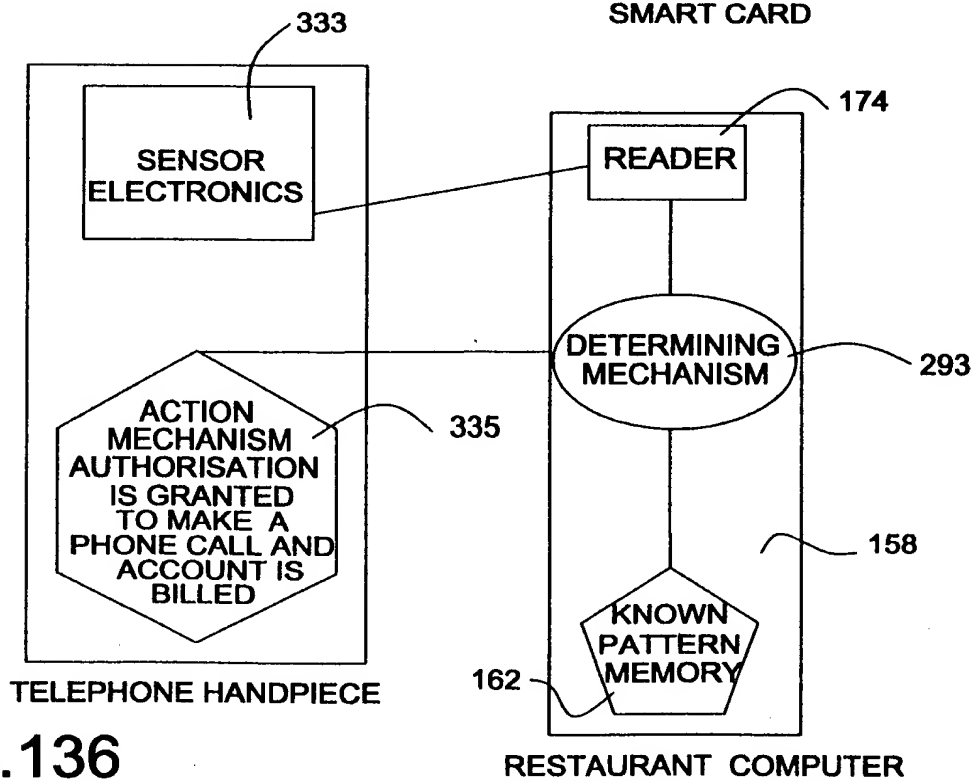


FIG. 136

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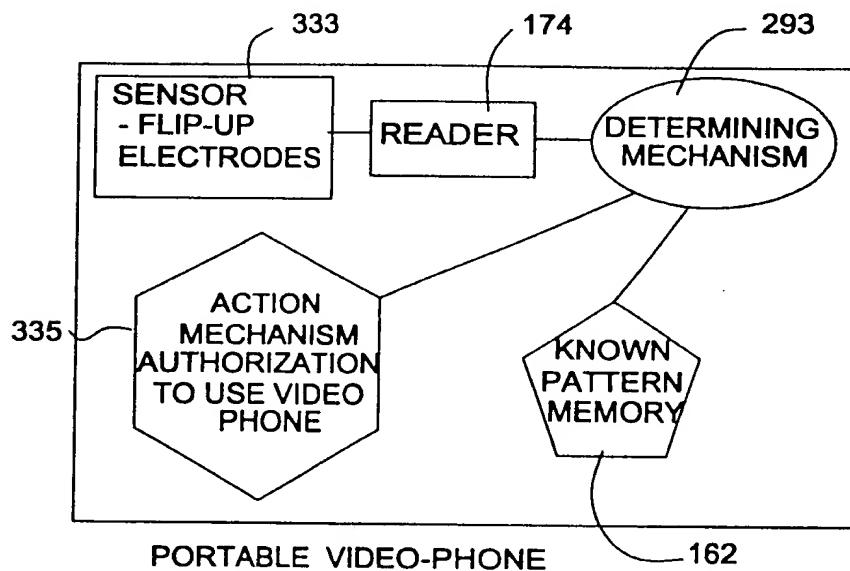


FIG.137

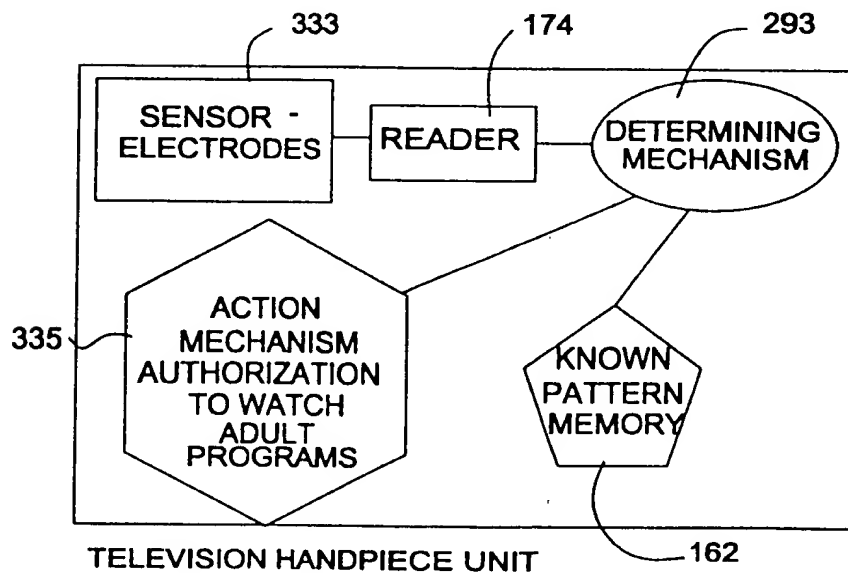


FIG.138

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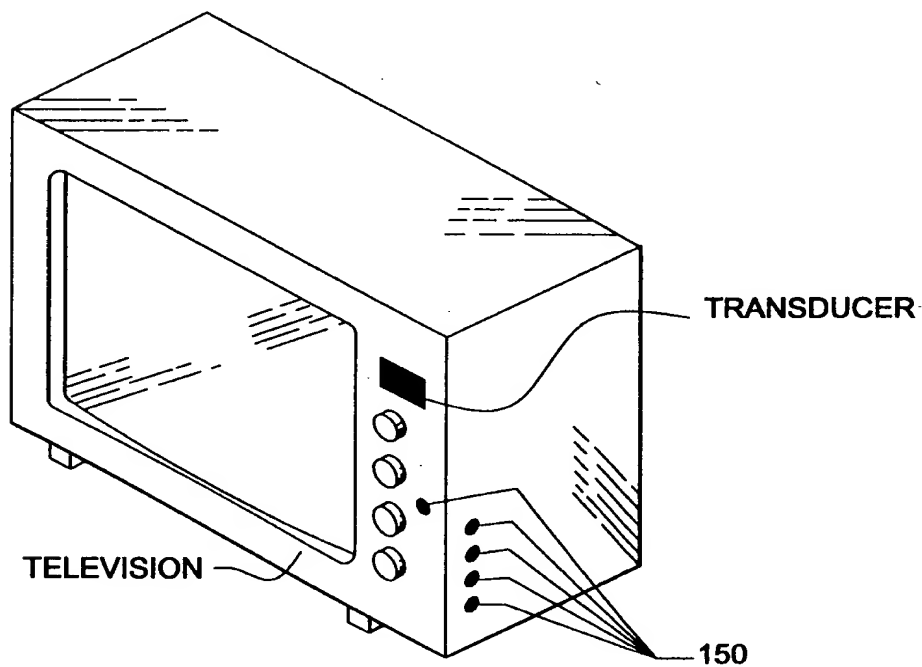


FIG. 138a

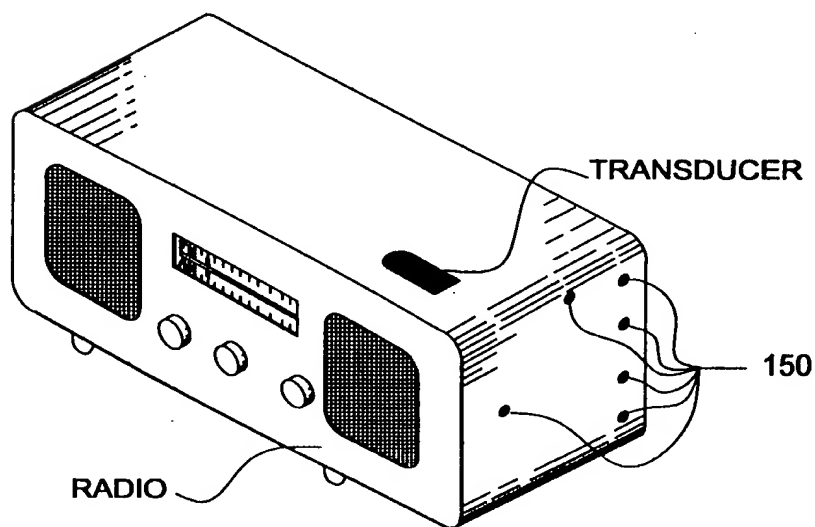


FIG. 138b

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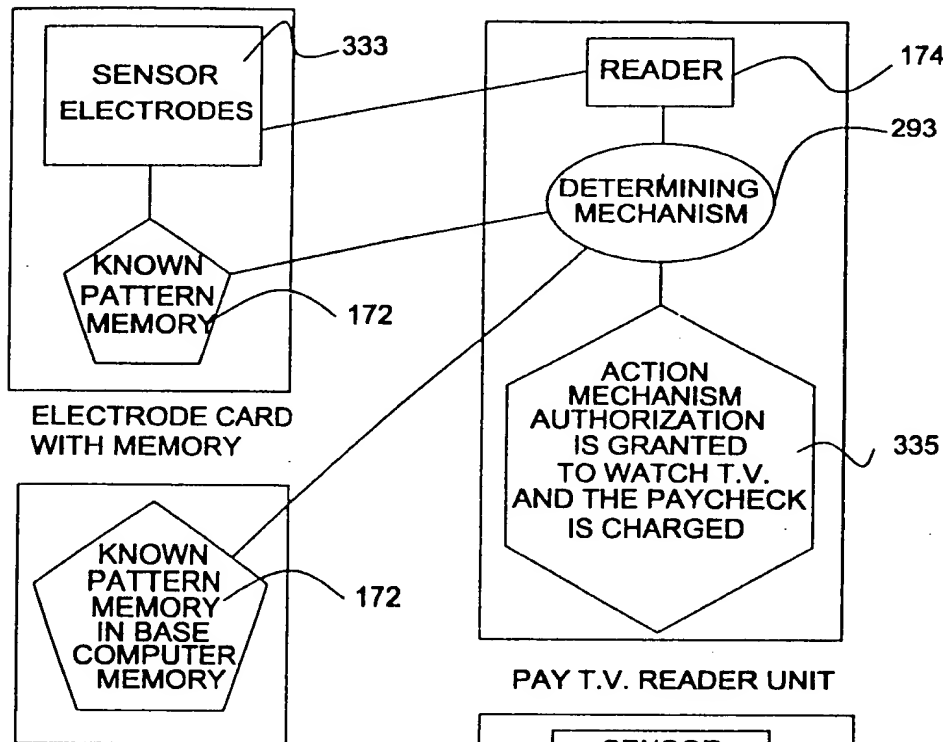


FIG. 139

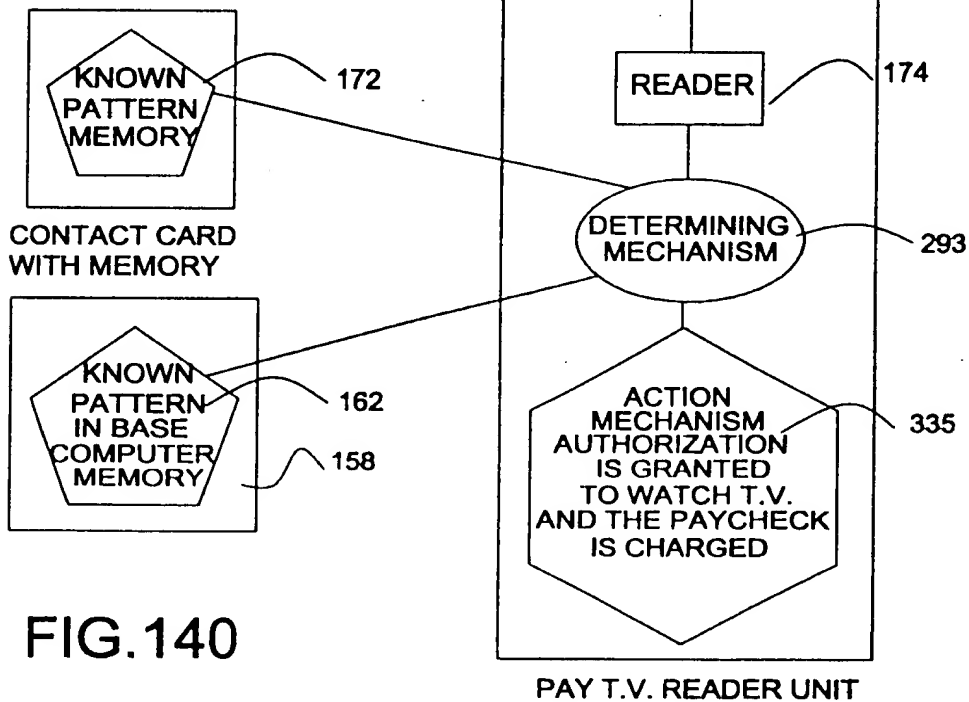
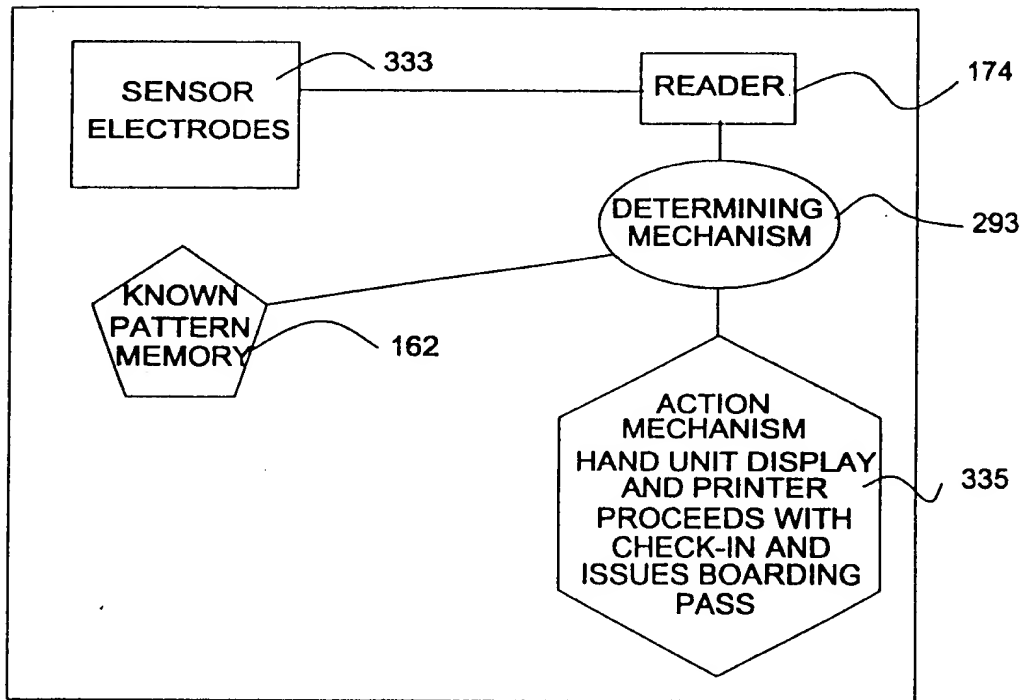


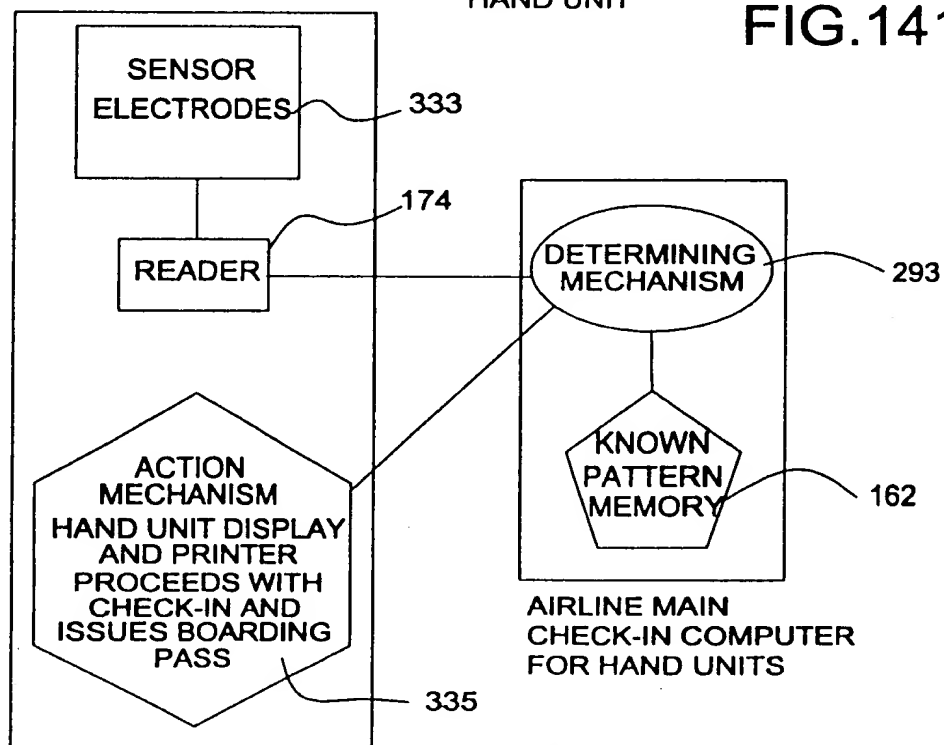
FIG. 140

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AIRLINE CHECK-IN
HAND UNIT

FIG.141



AIRLINE CHECK-IN
HAND UNIT

FIG.142

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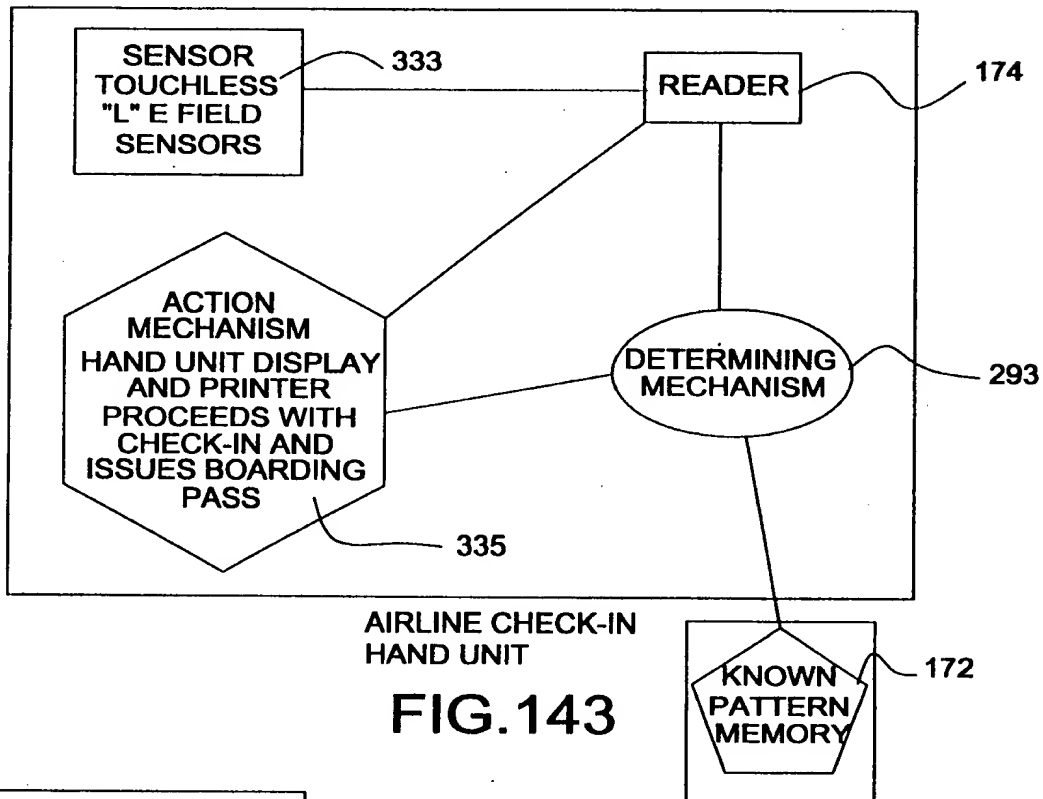


FIG. 143

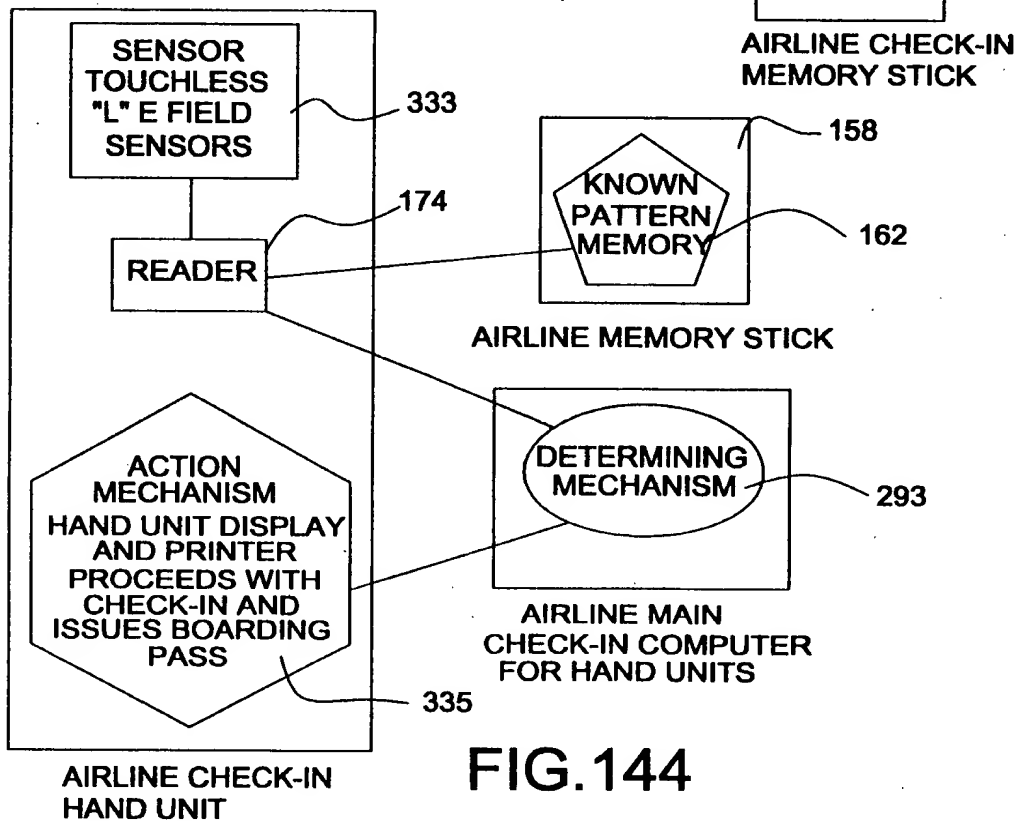
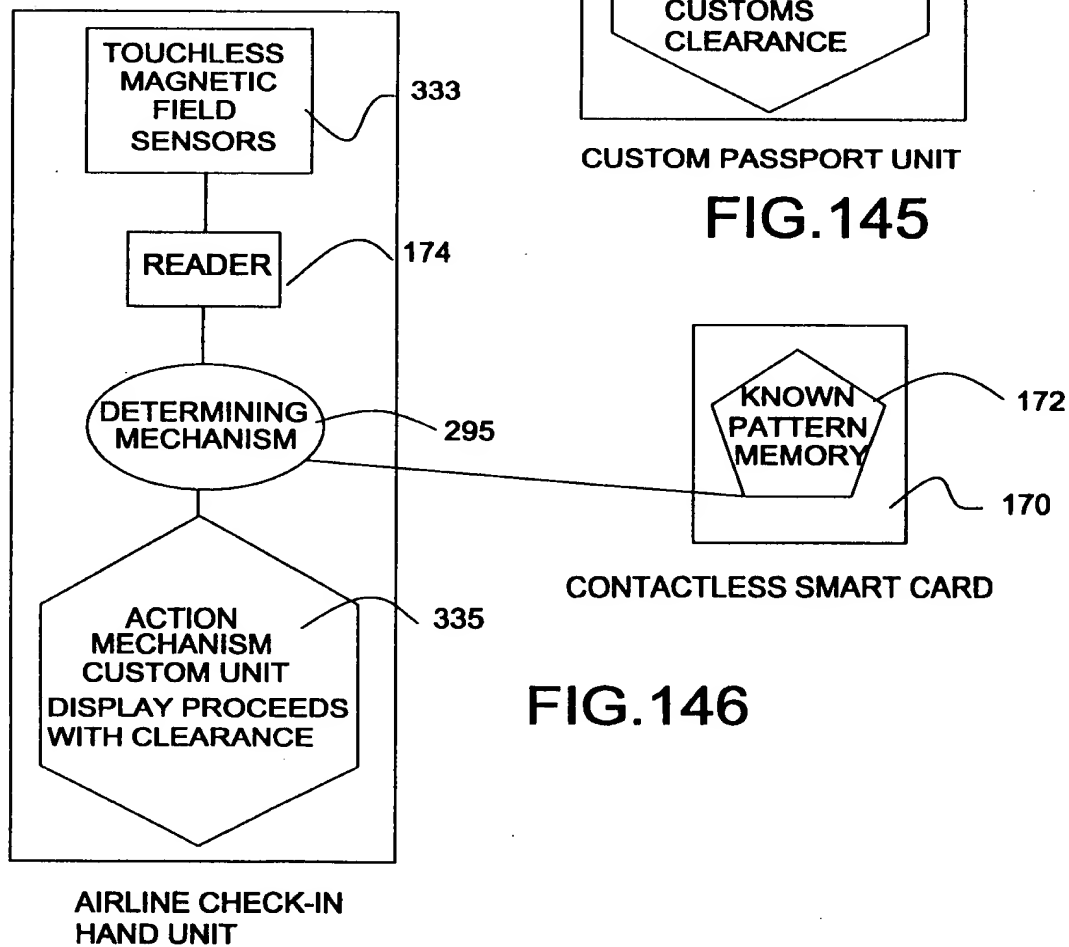
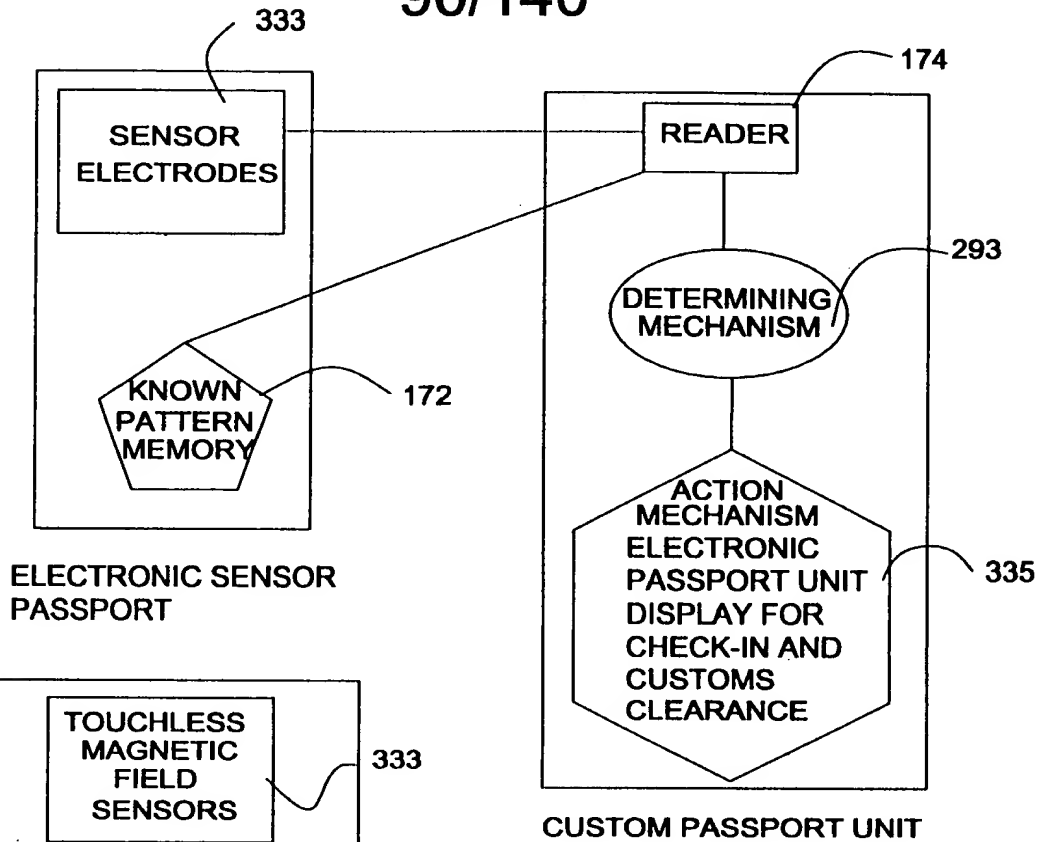
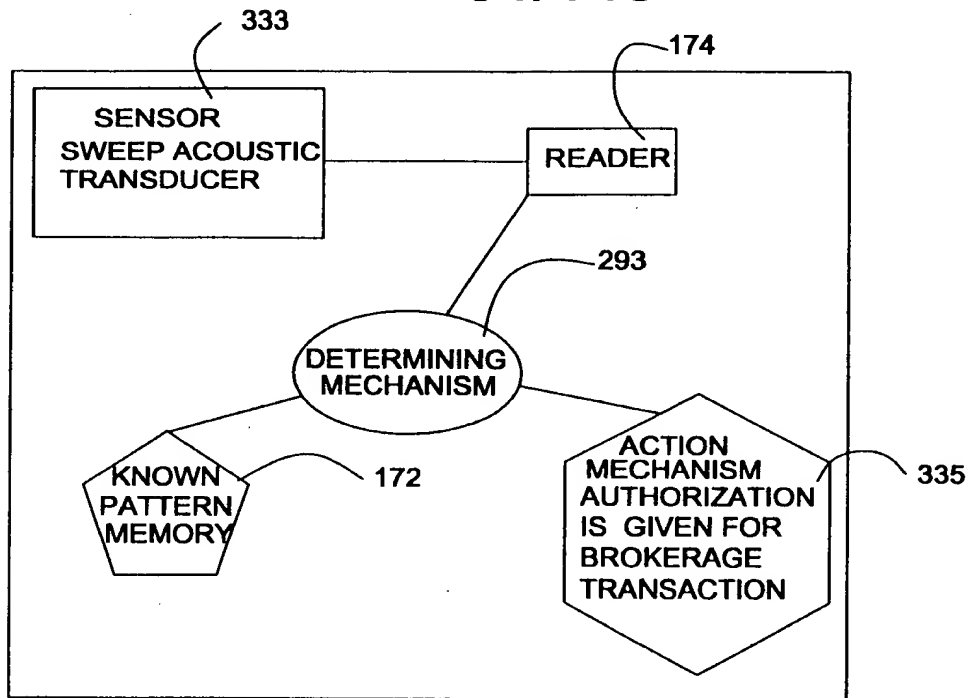


FIG. 144

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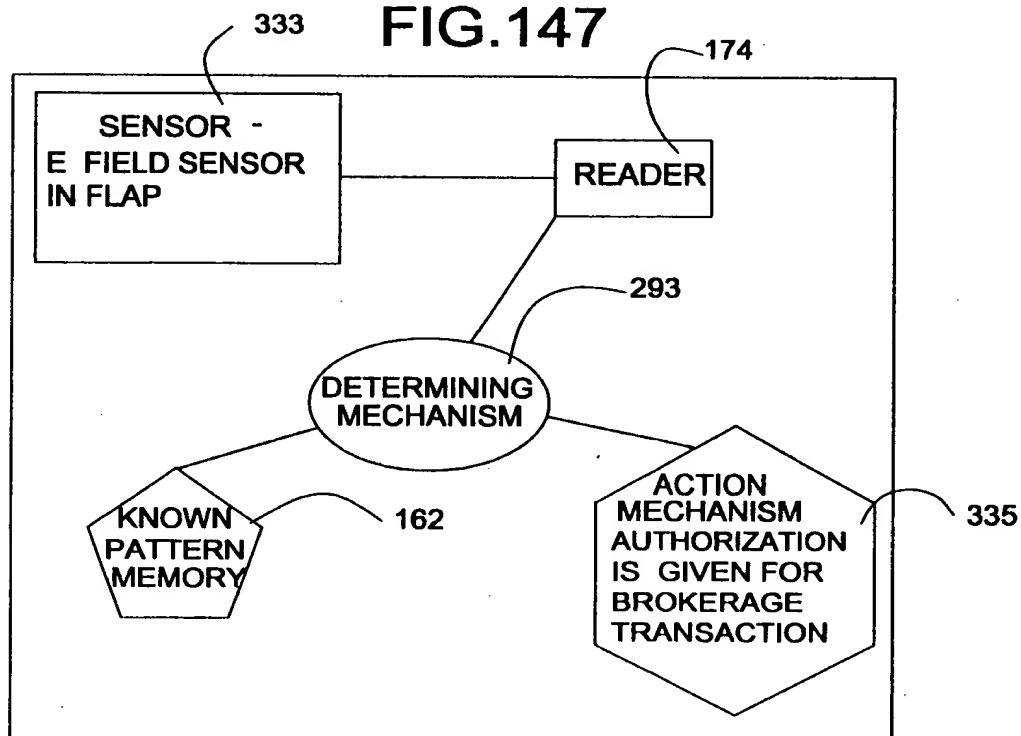


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RECESSED SENSOR UNIT IN LAP-TOP COMPUTER

FIG.147



RECESSED FLAP SENSOR UNIT IN LAP-TOP COMPUTER

FIG.148

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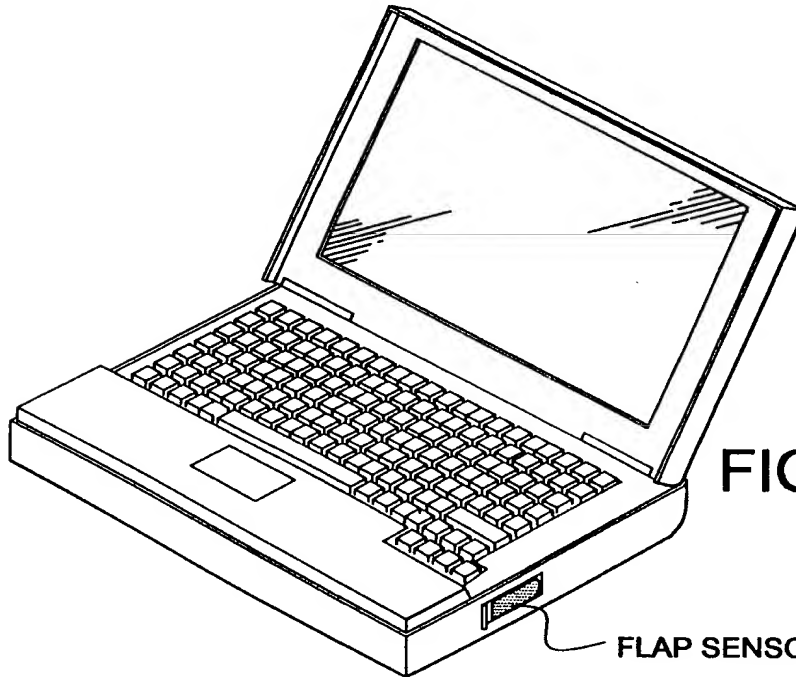


FIG. 148a

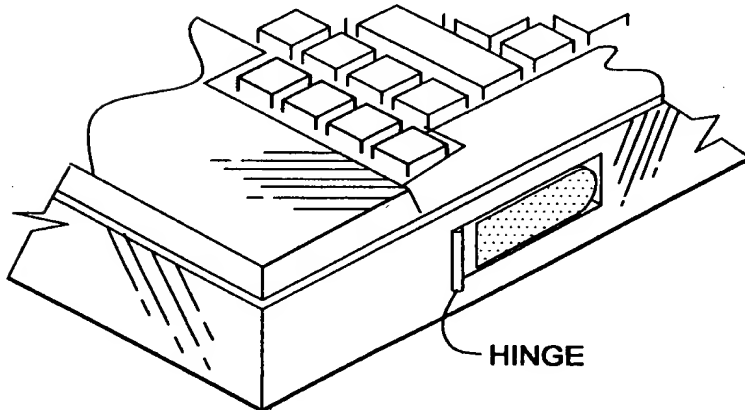


FIG. 148b

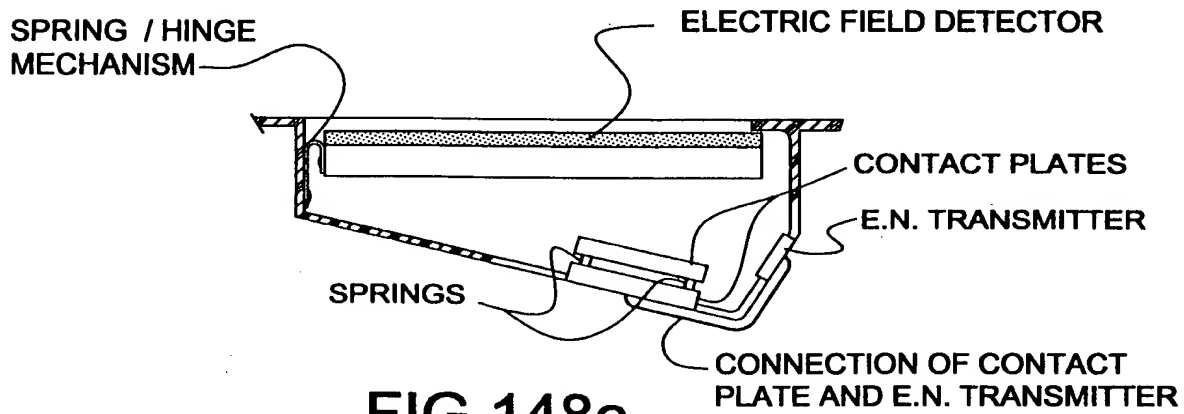
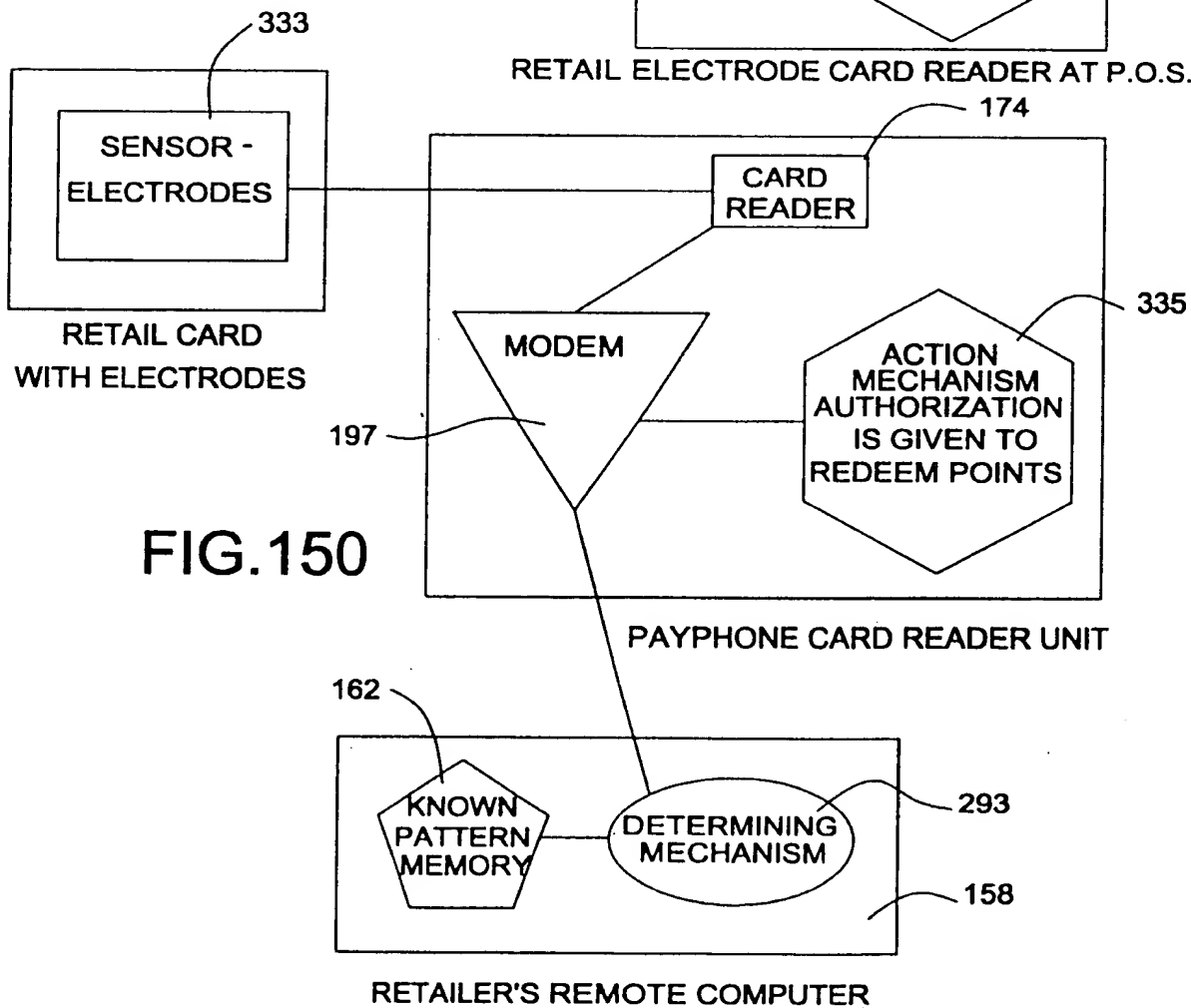
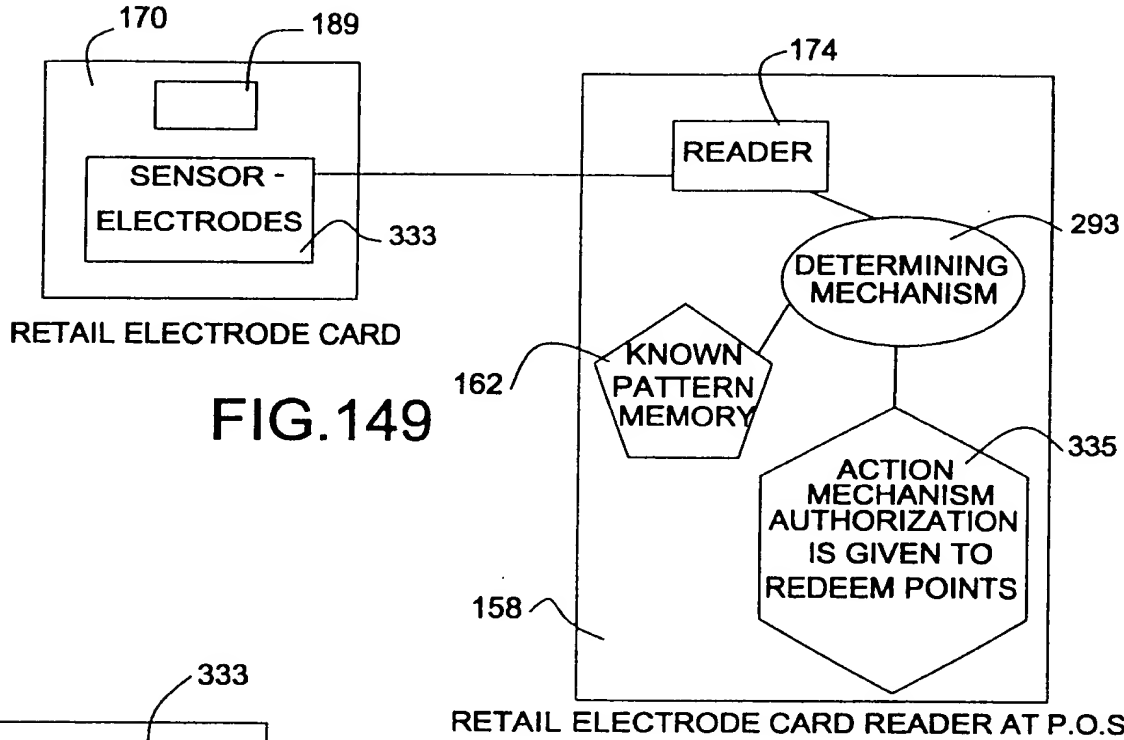


FIG. 148c

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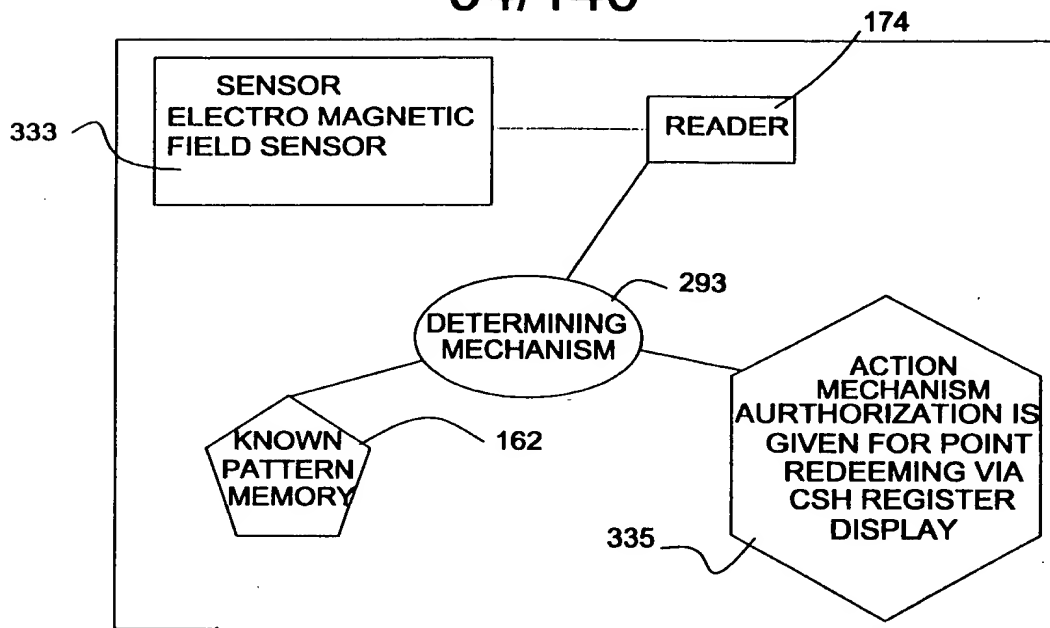


FIG.151

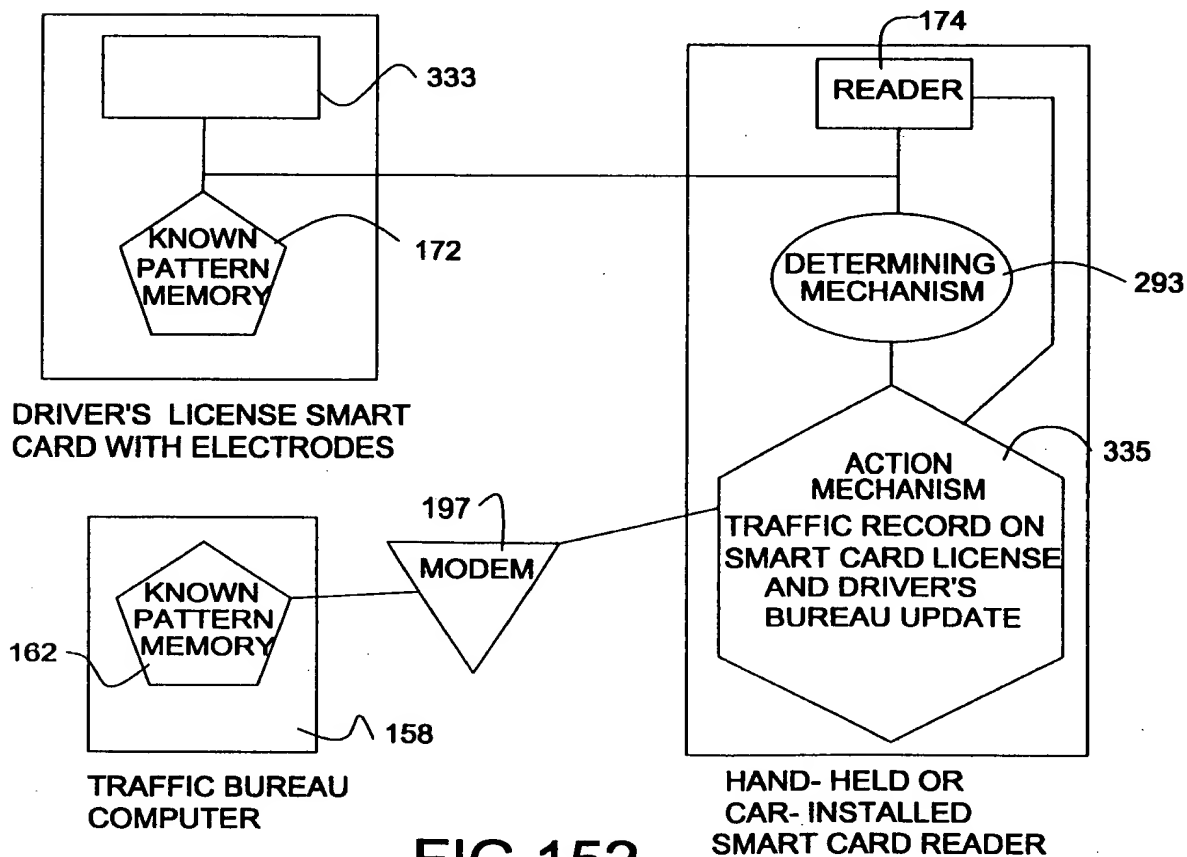


FIG.152

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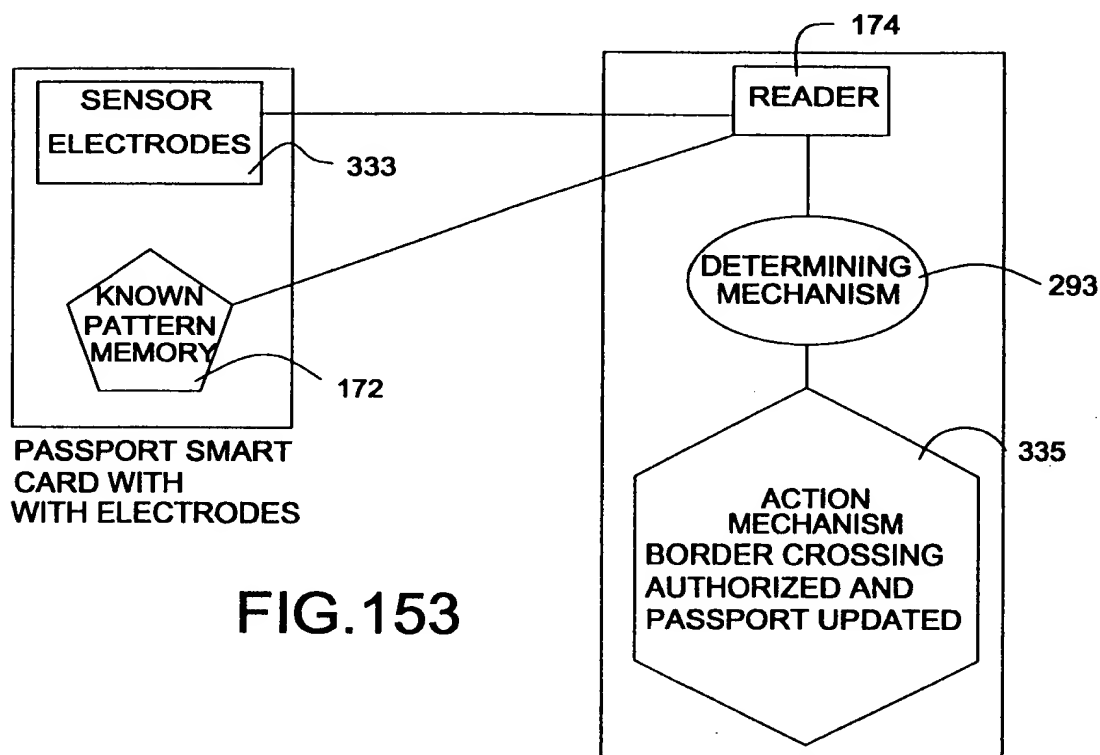


FIG.153

PASSPORT SMART CARD READER

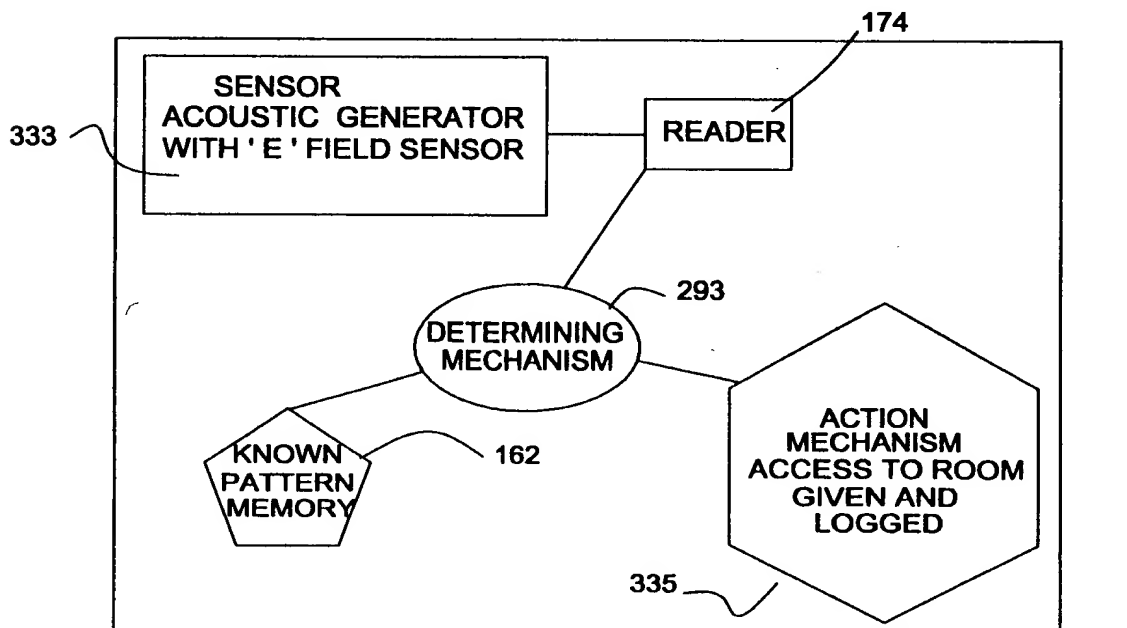


FIG.154

WALL MOUNTED HANDPIECE
NEXT TO DOOR

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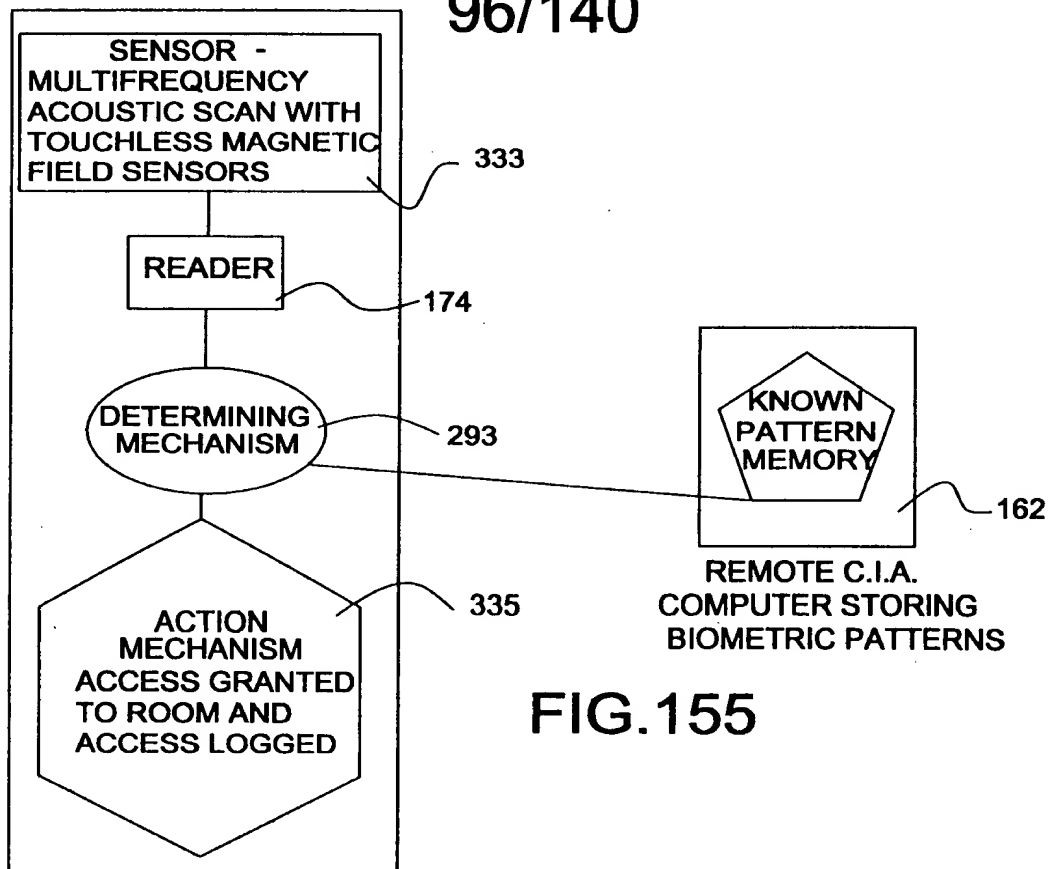


FIG.155

HAND UNIT ON DOOR

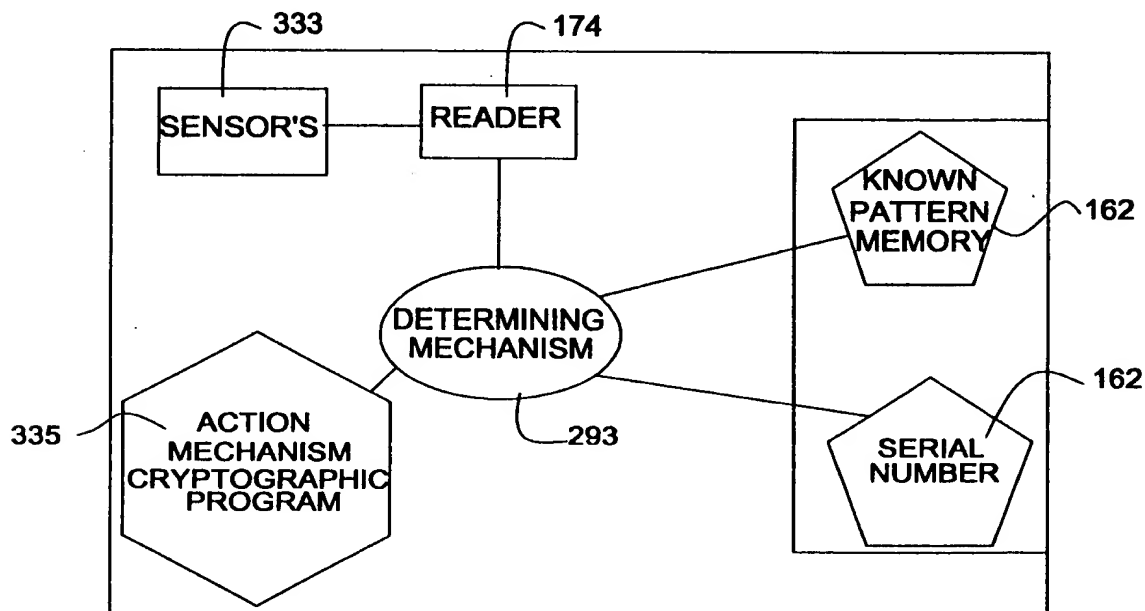


FIG.156

SMART SENSOR CARD

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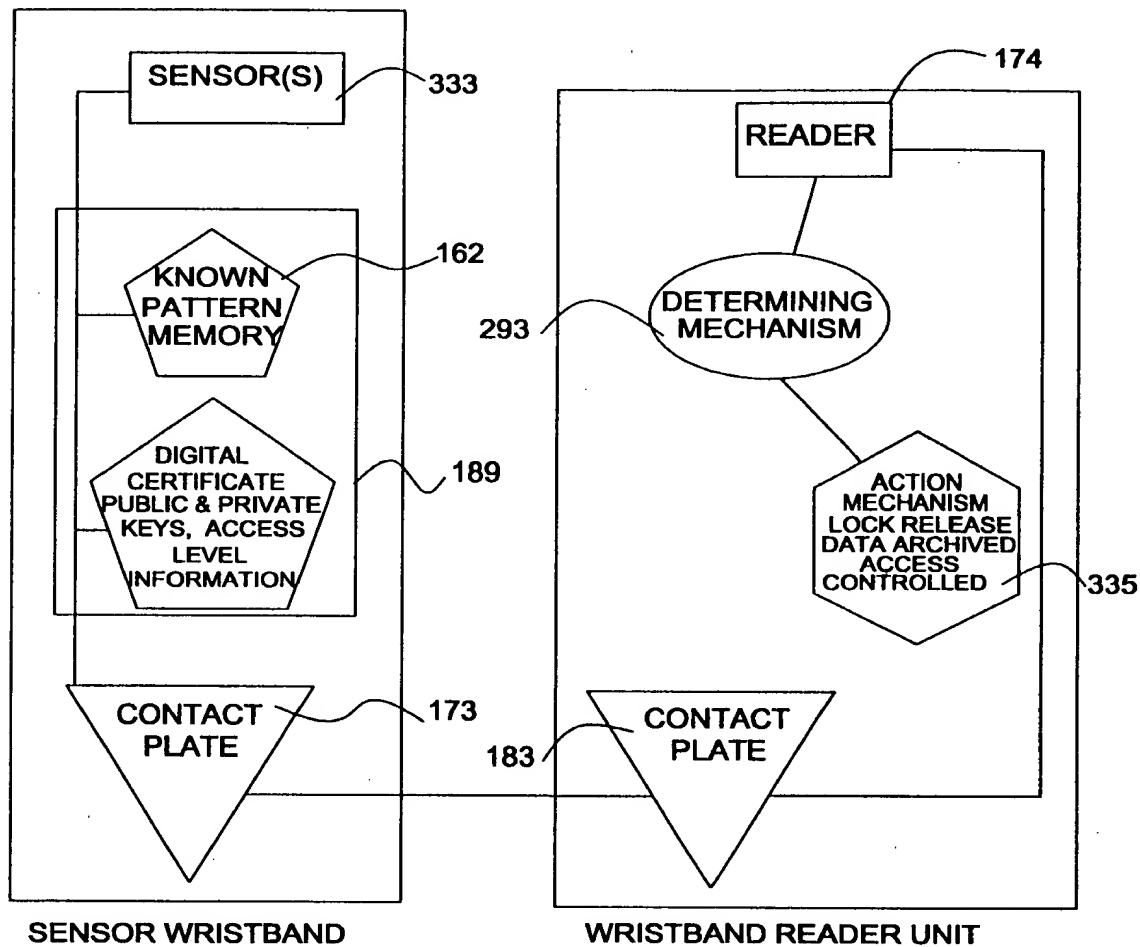


FIG.157

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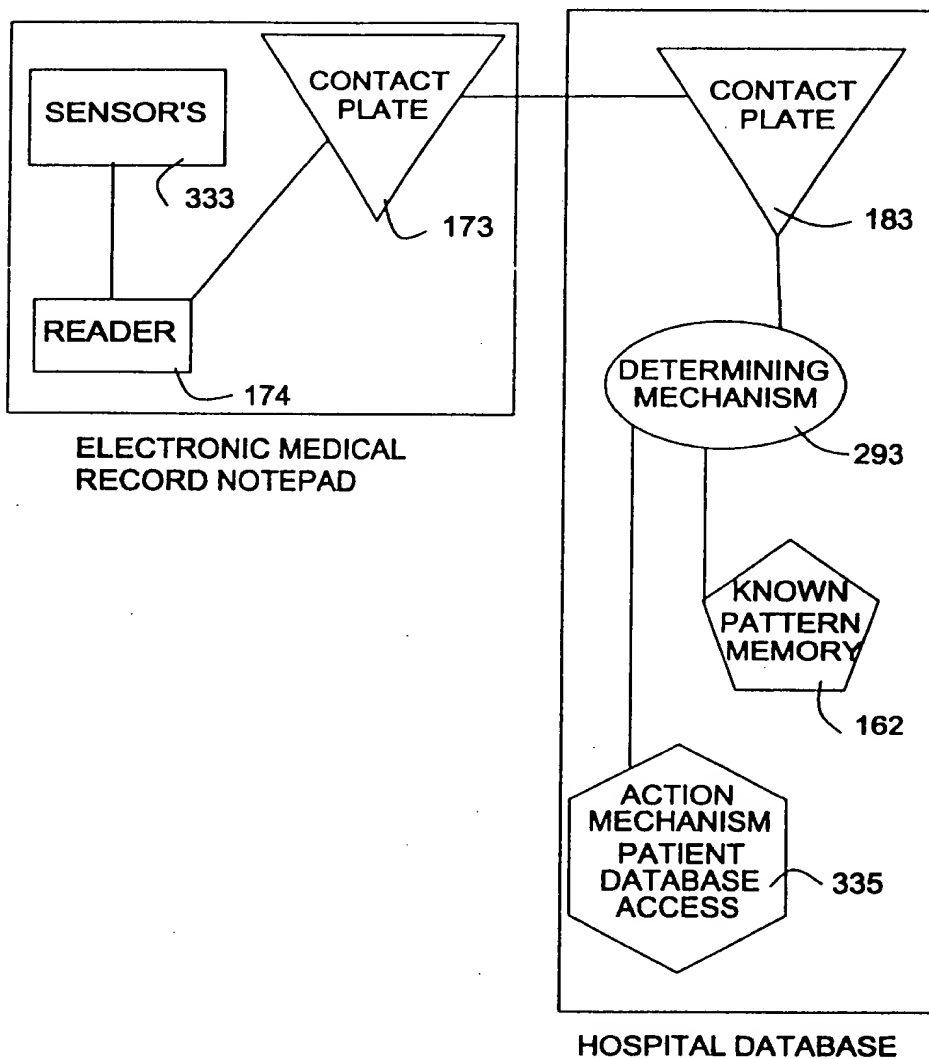
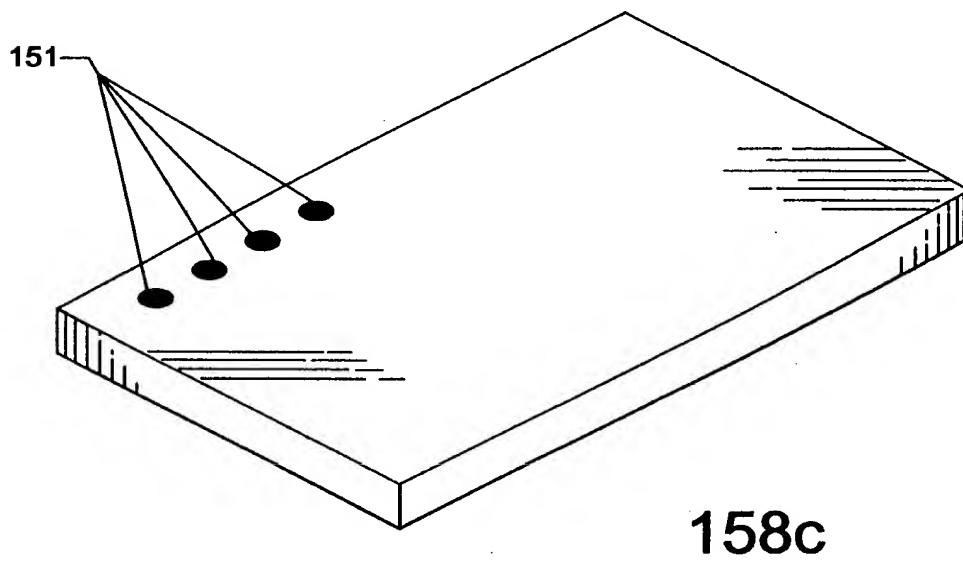
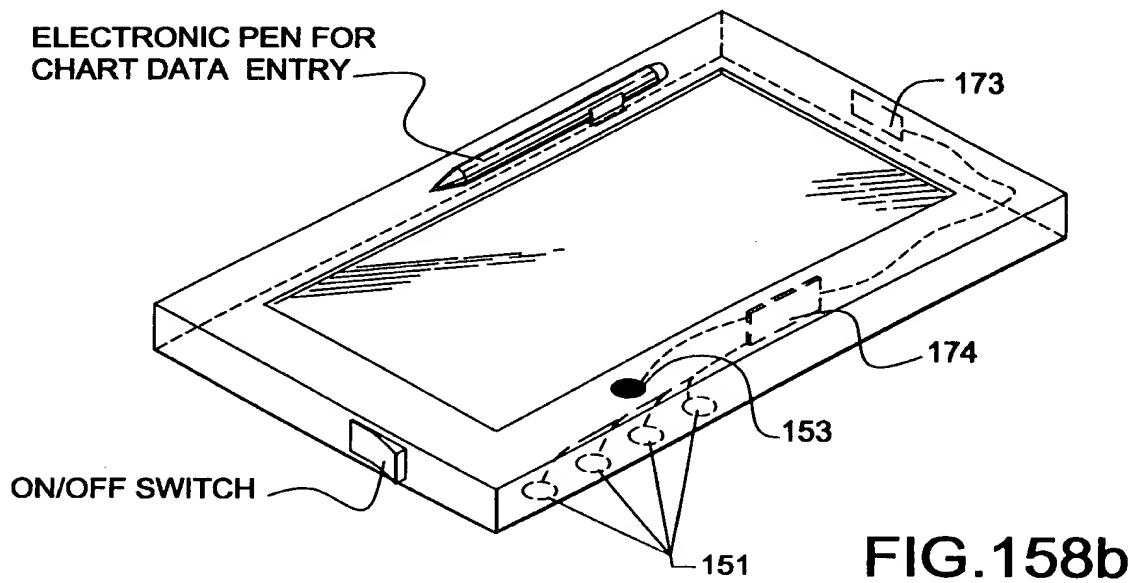


FIG.158

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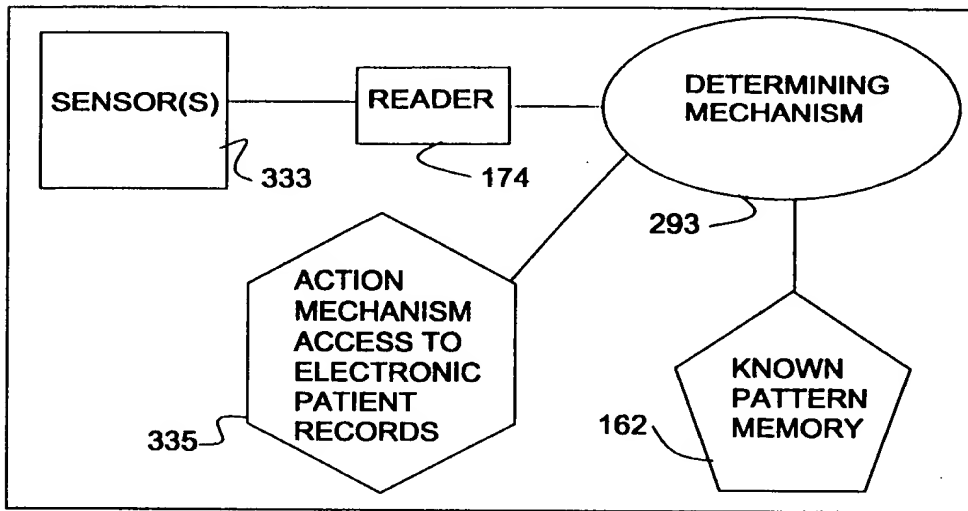


FIG.159

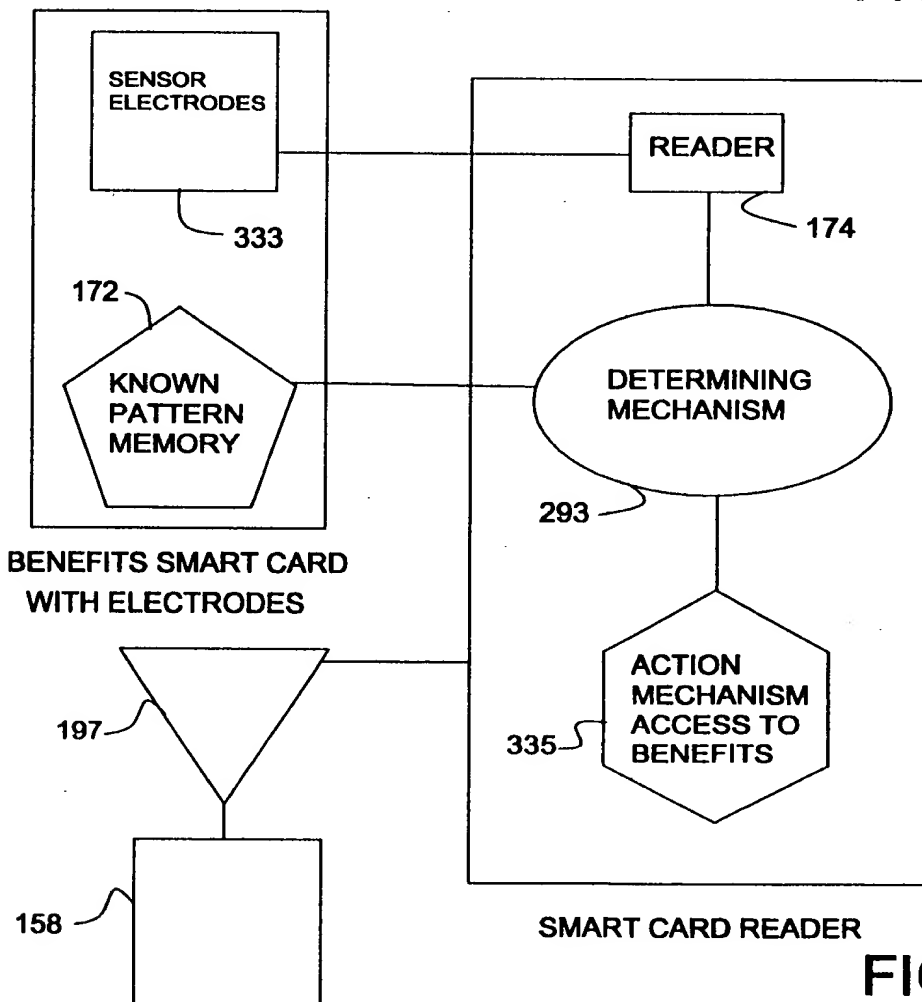


FIG.160

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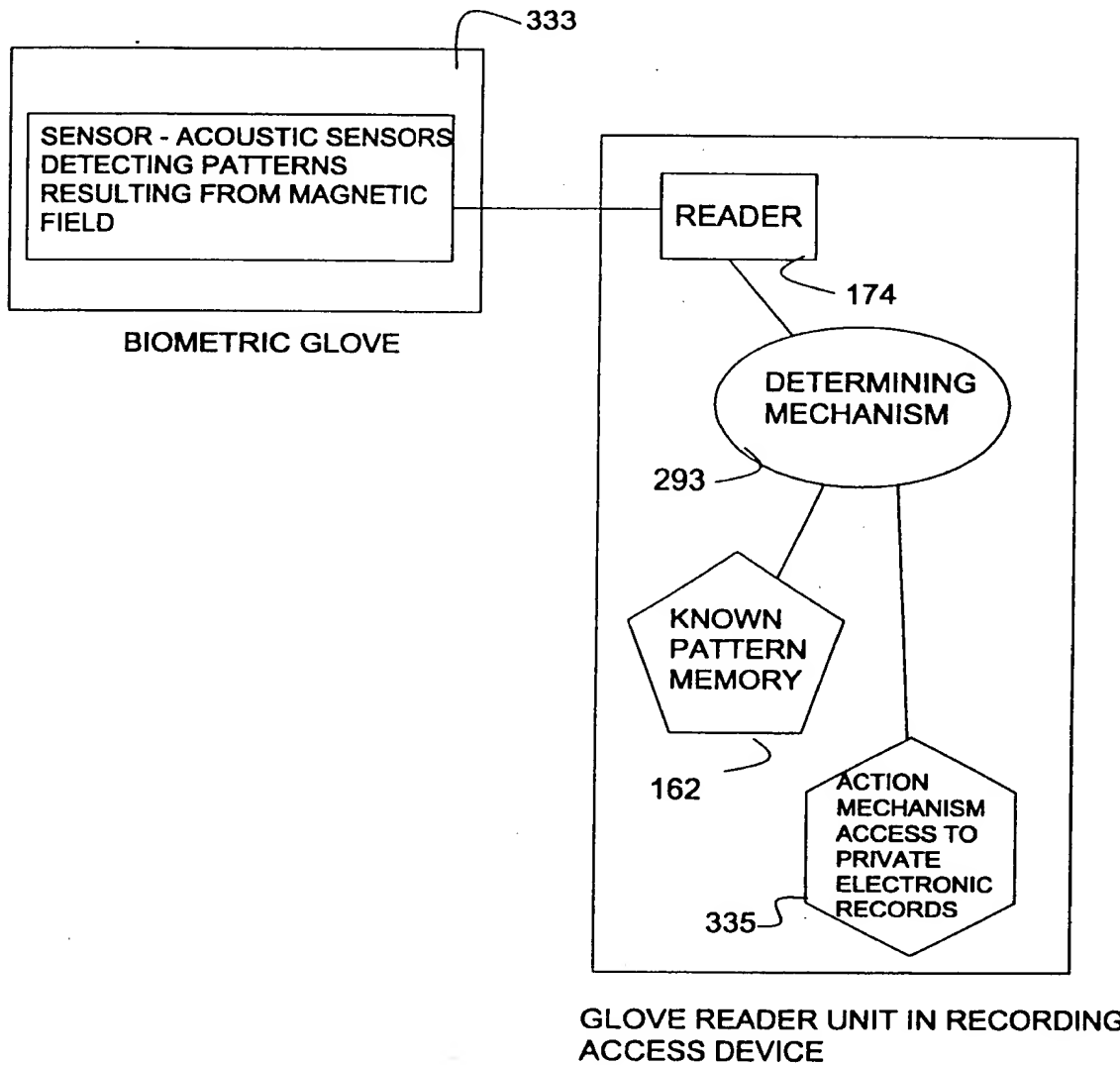


FIG.161

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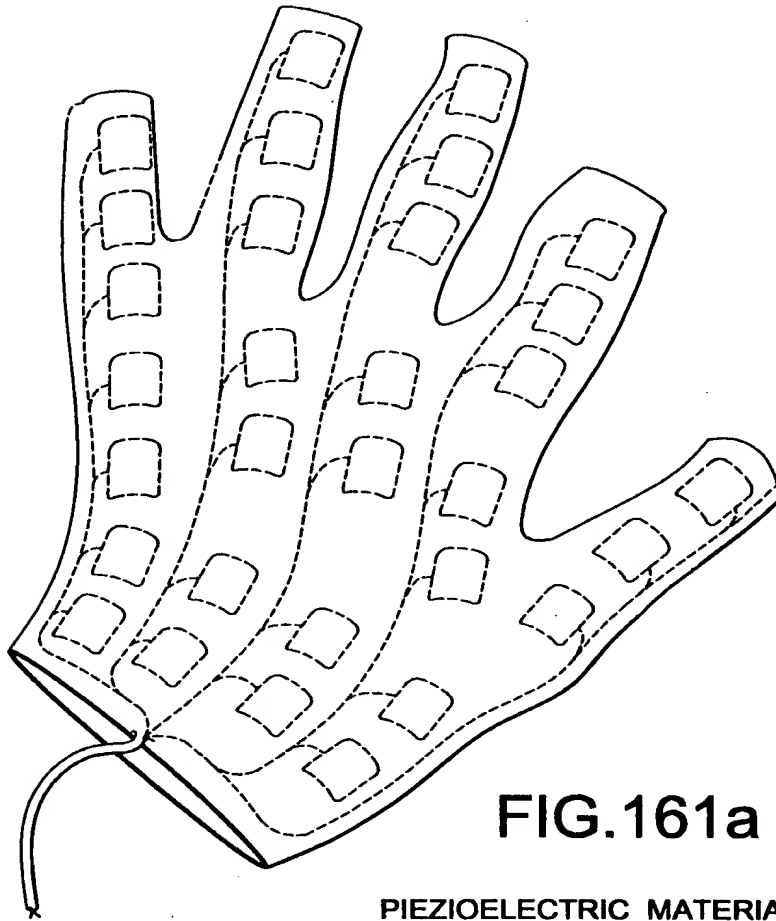


FIG. 161a

PIEZOELECTRIC MATERIAL FOR
ACOUSTIC SENSORS

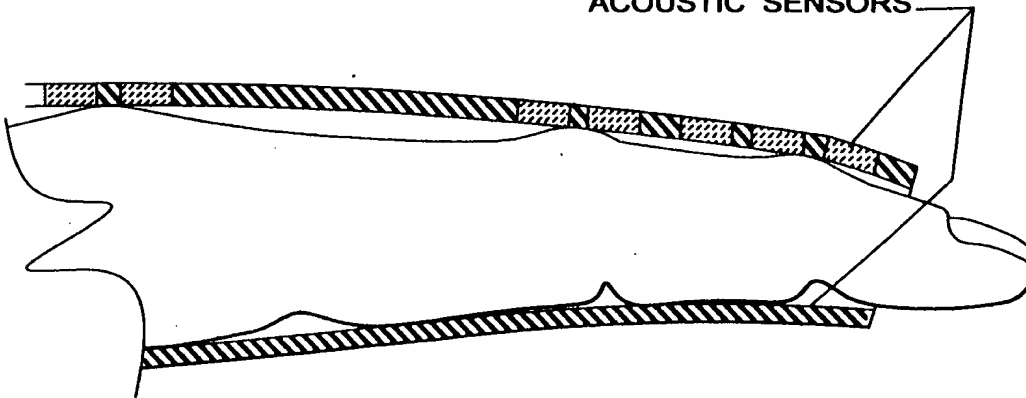


FIG. 161b

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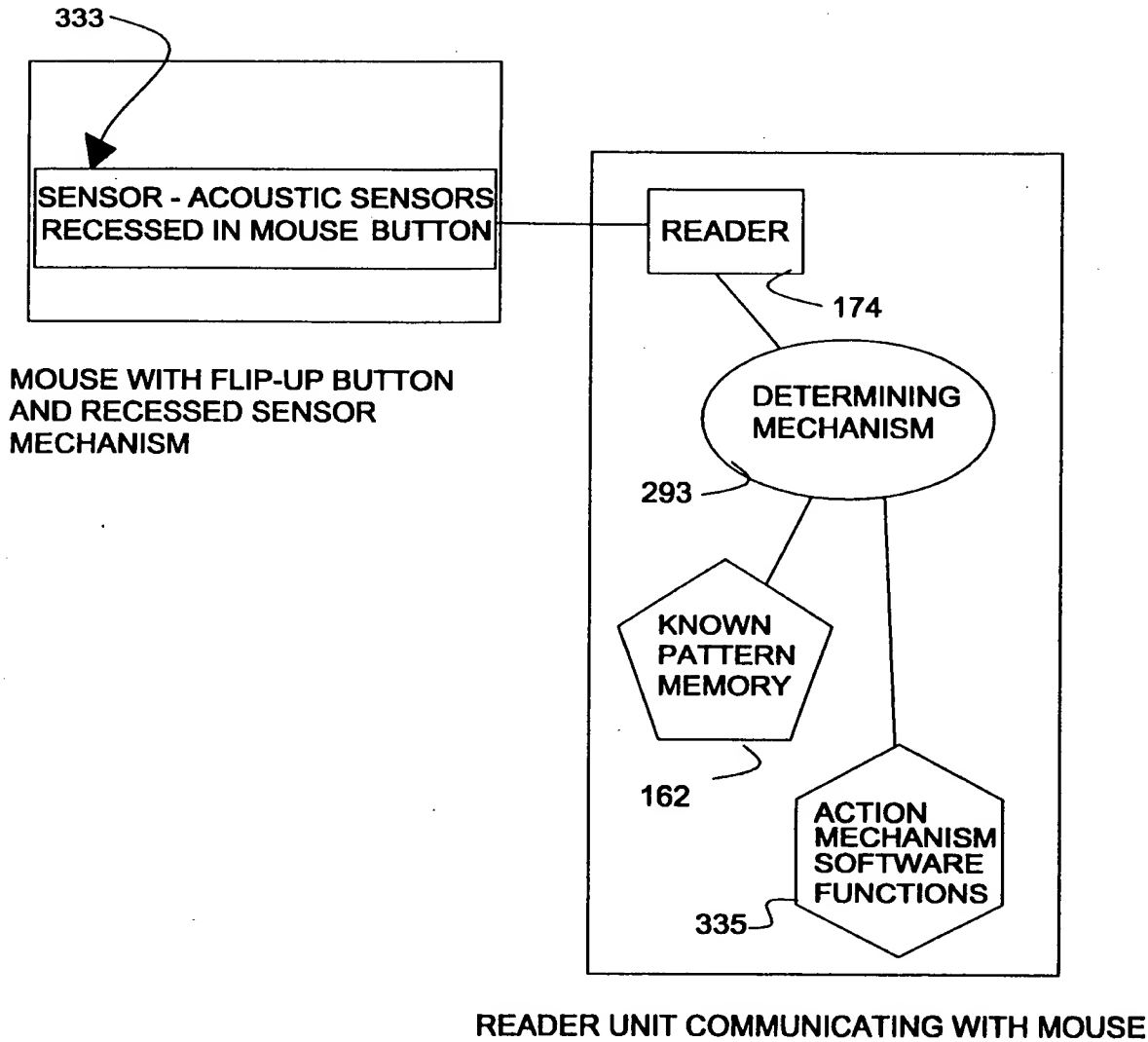


FIG.162

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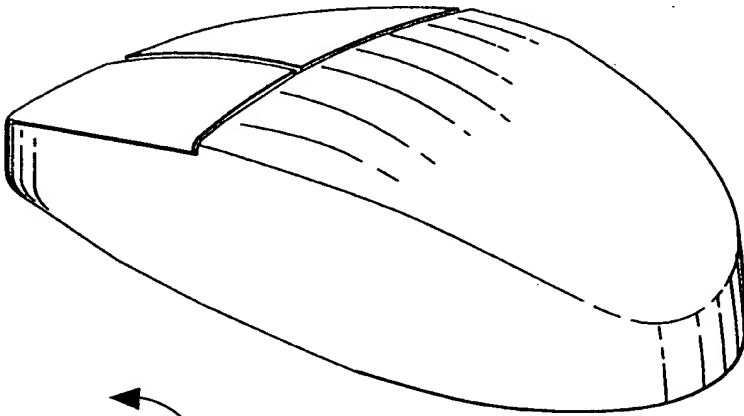


FIG. 162a

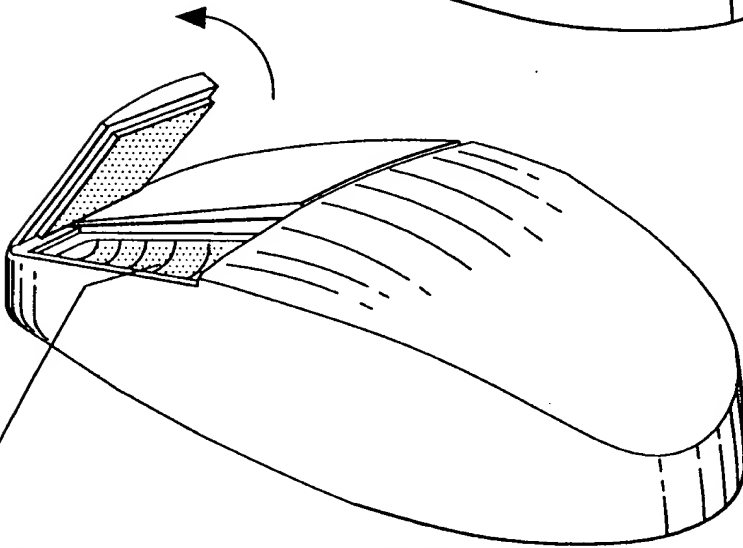


FIG. 162b

MOLDED ACOUSTIC SENSOR

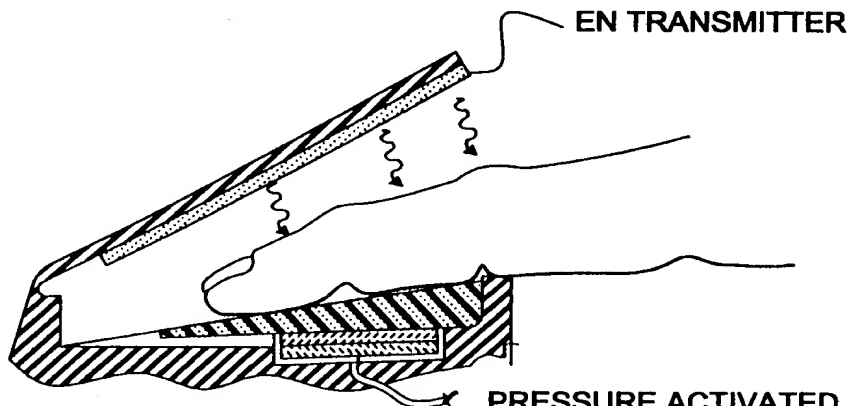


FIG. 162c

PRESSURE ACTIVATED
ACOUSTIC SENSOR

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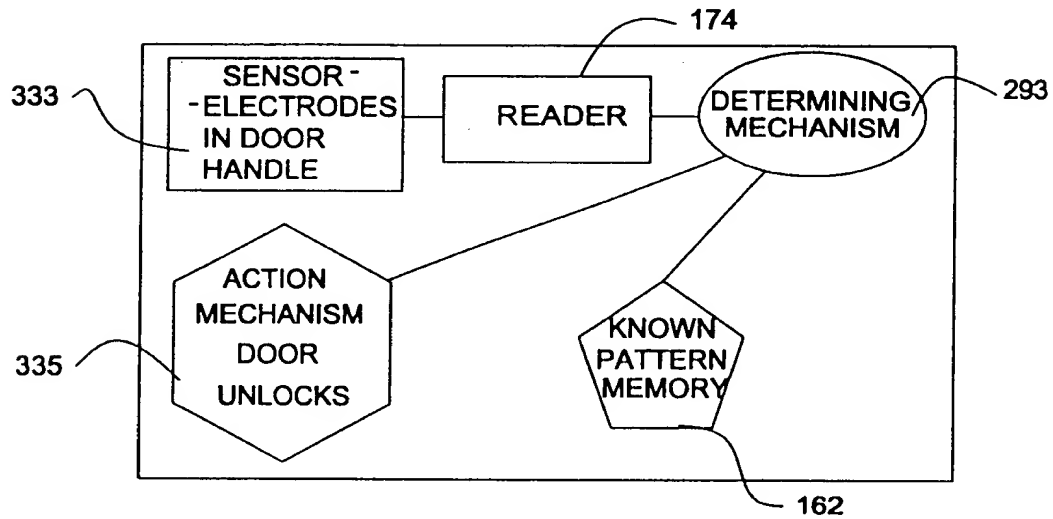
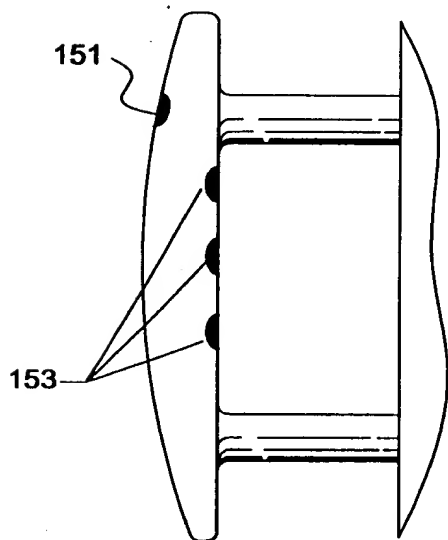
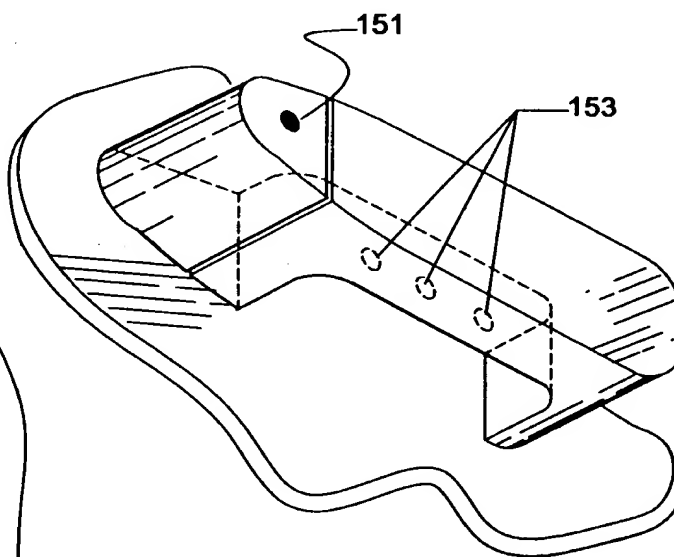
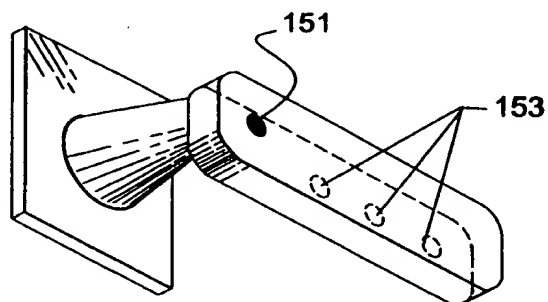
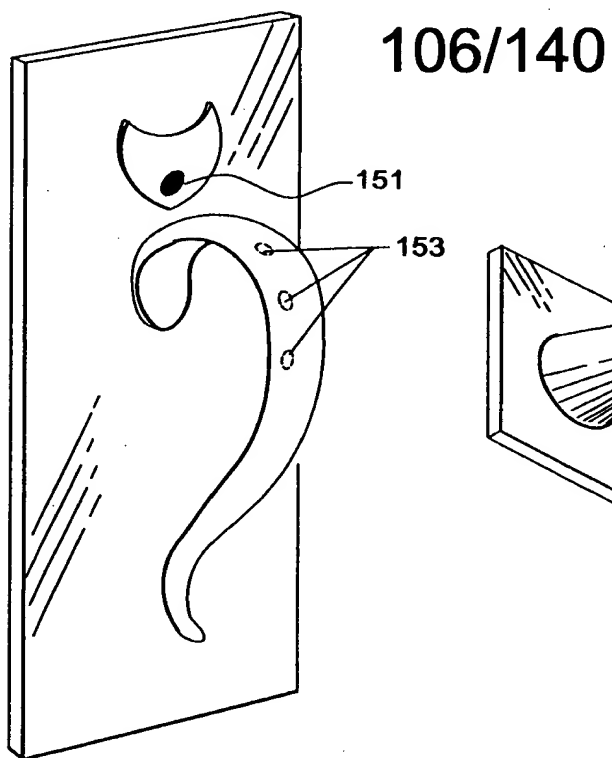
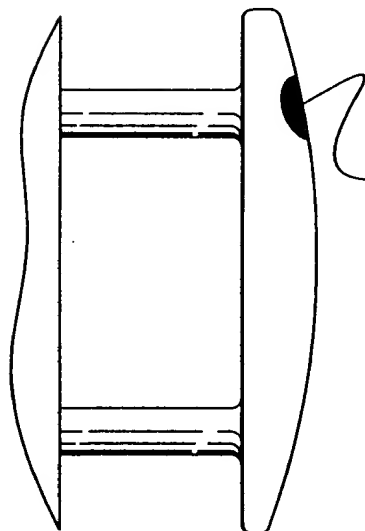
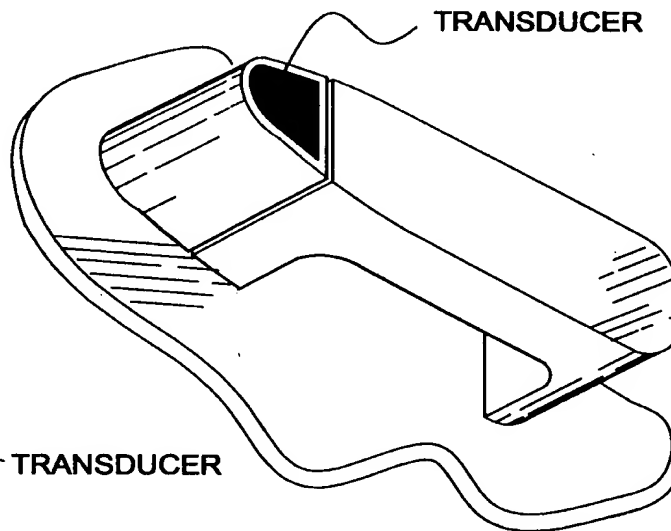
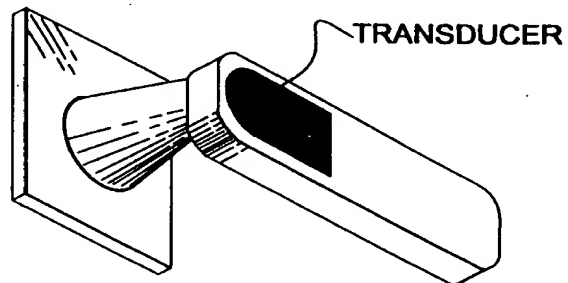
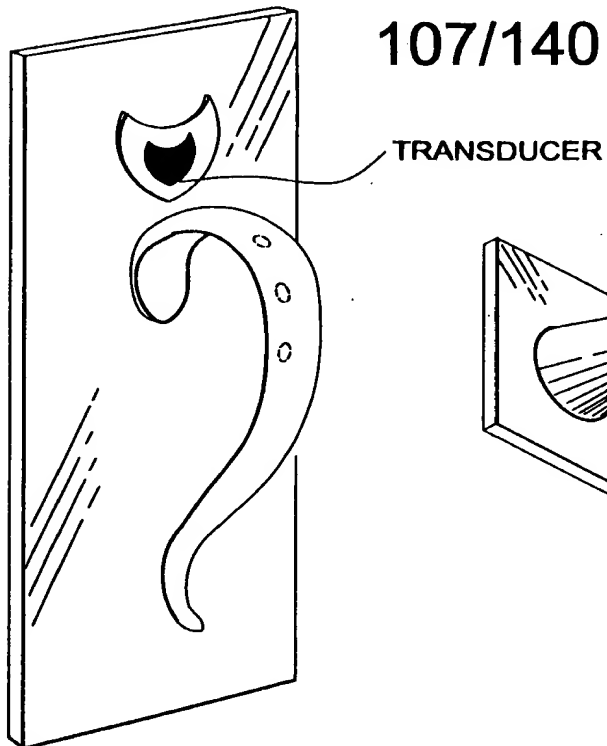
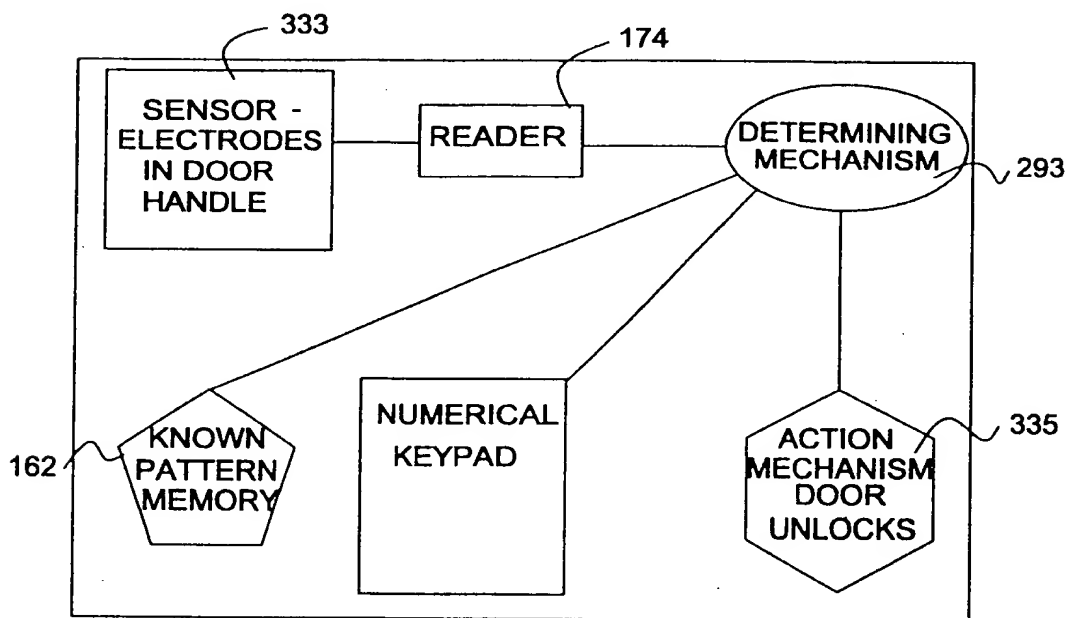


FIG.163



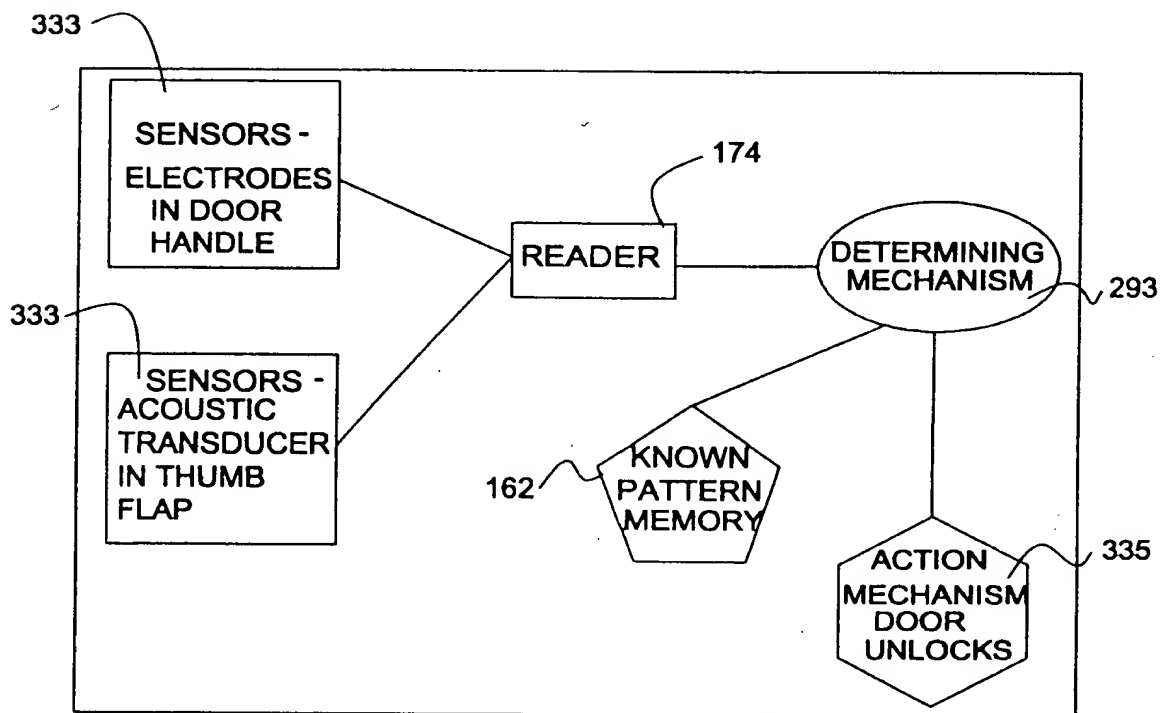


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COMPOSITE BIOMETRIC LOCK

FIG.164



MULTIPLE BIOMETRIC LOCK

FIG.165

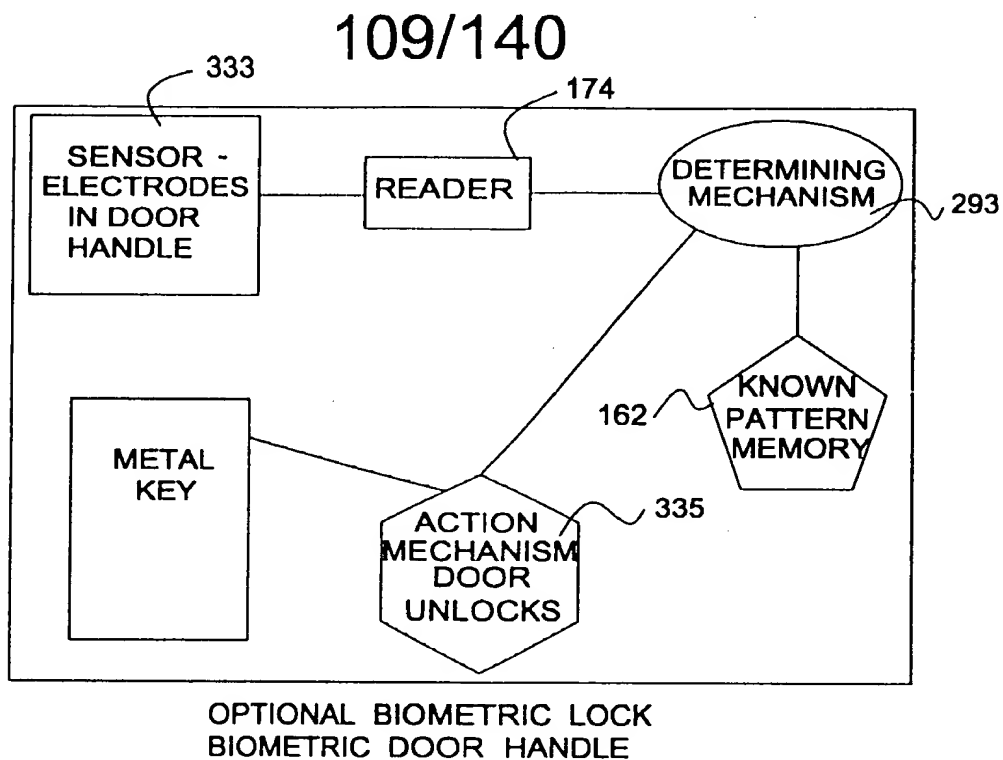


FIG.166

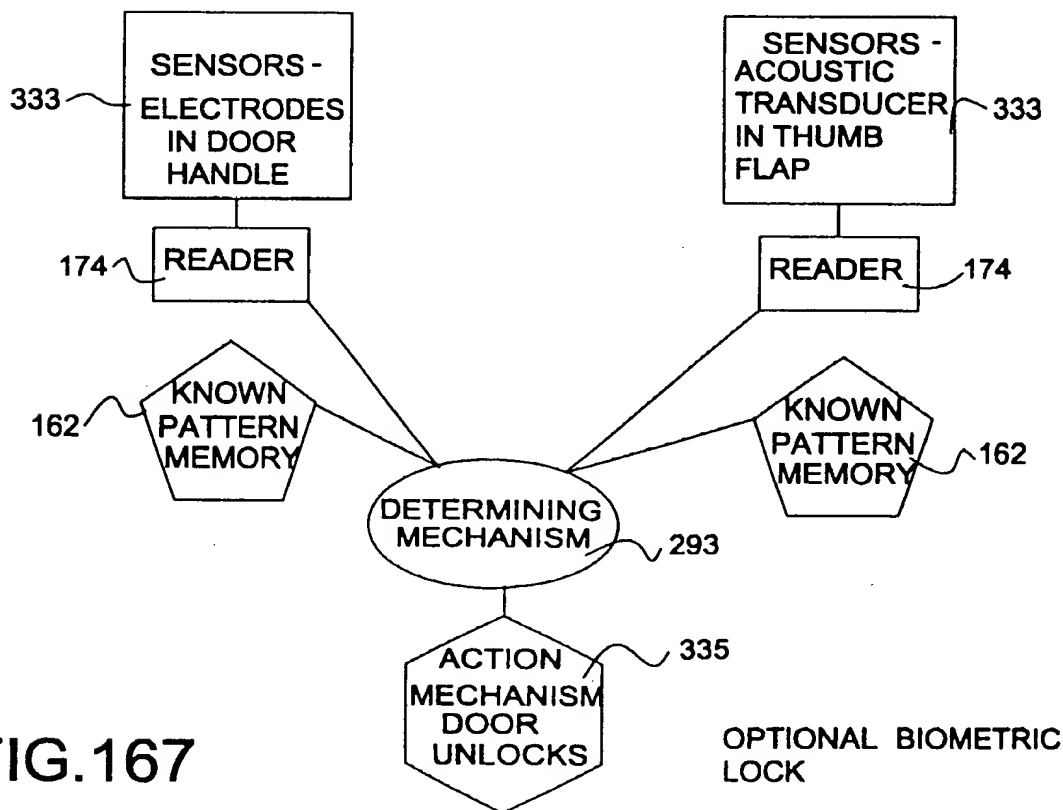
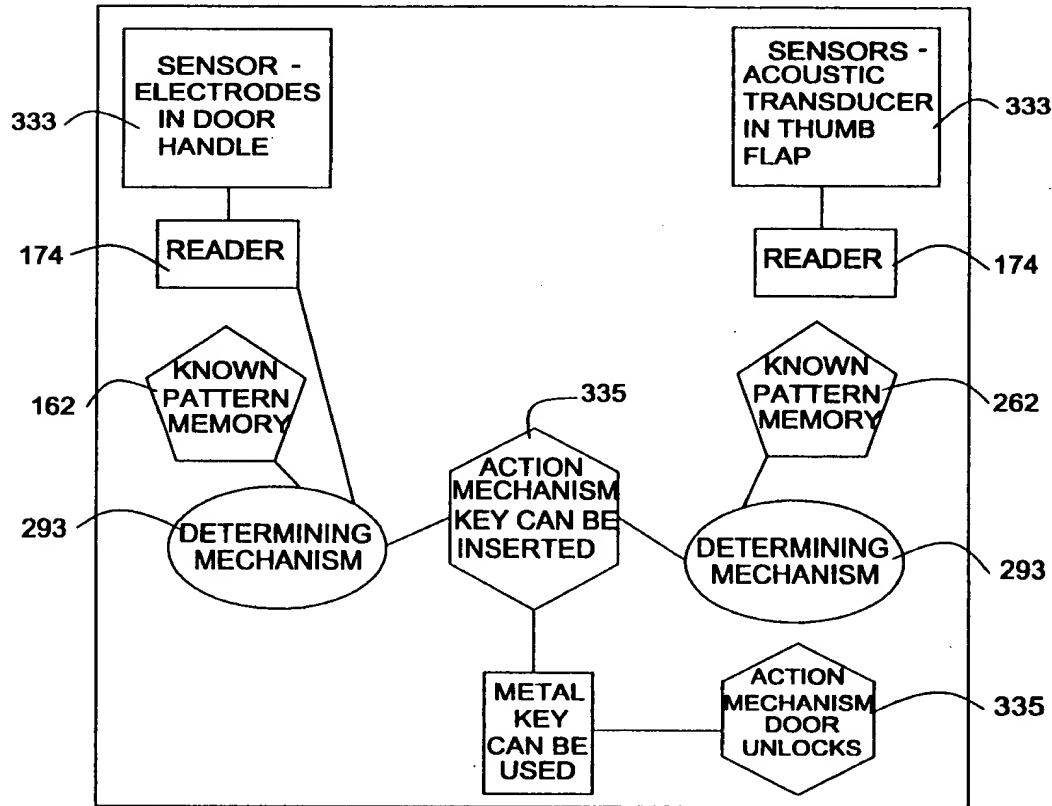


FIG.167

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MULTIPLE BIOMETRIC LOCK

FIG.168

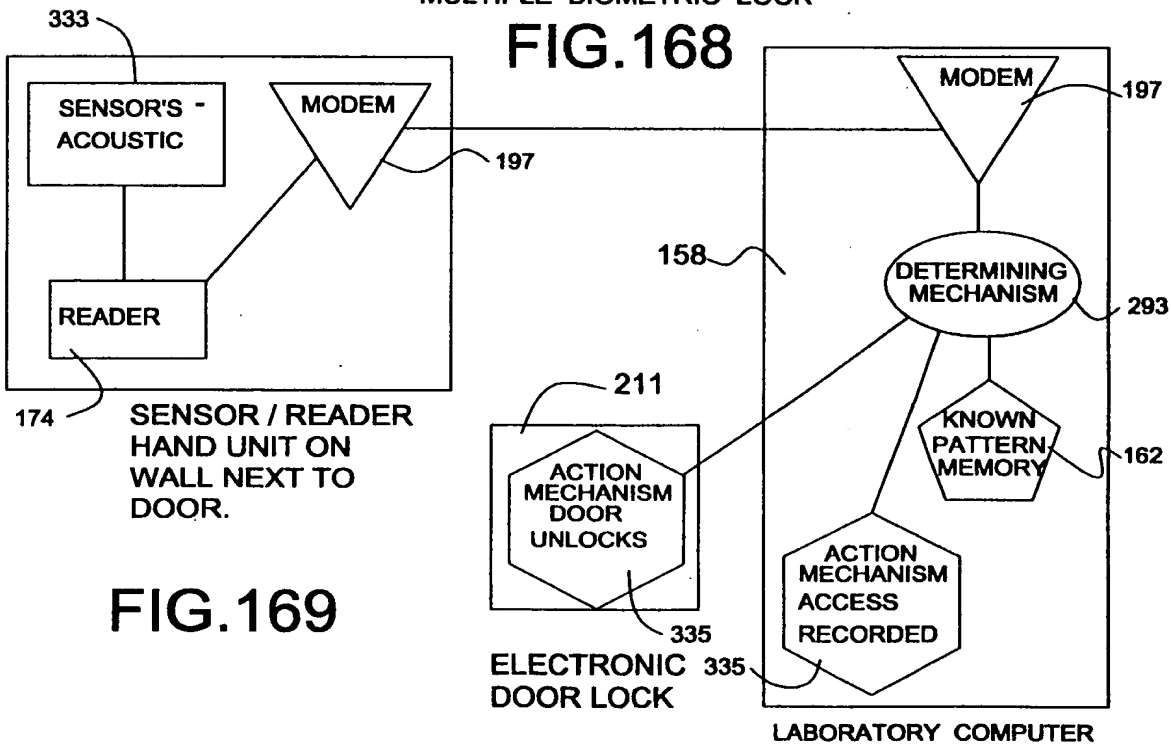


FIG.169

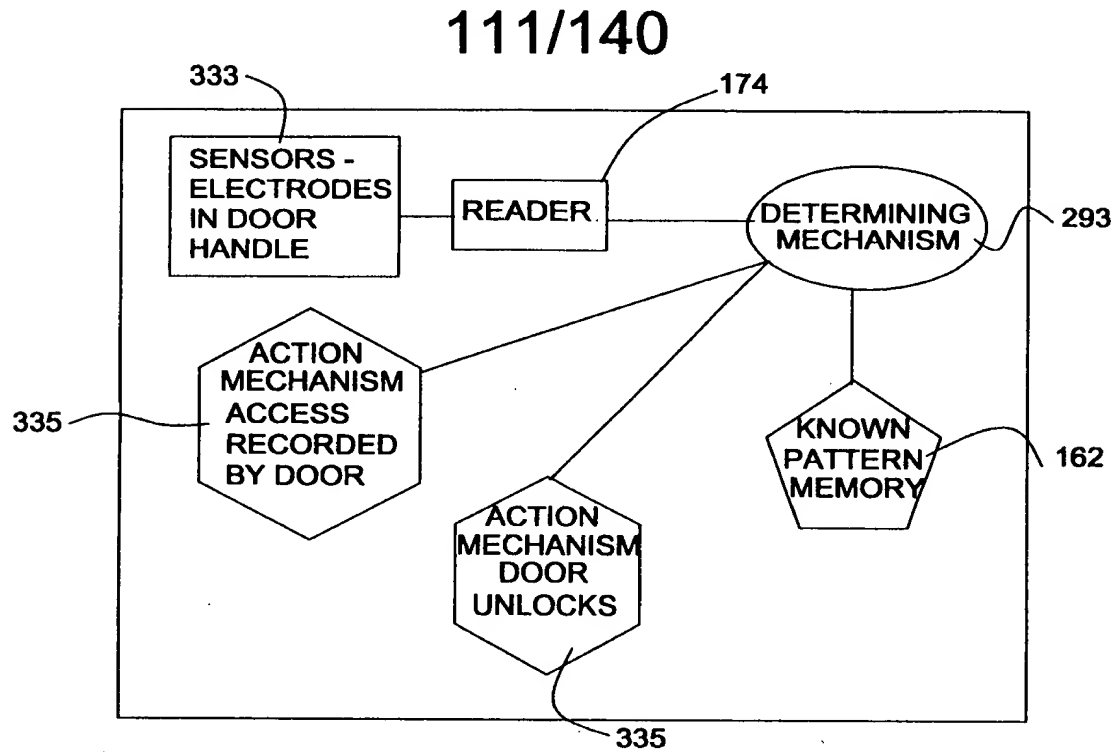


FIG.170

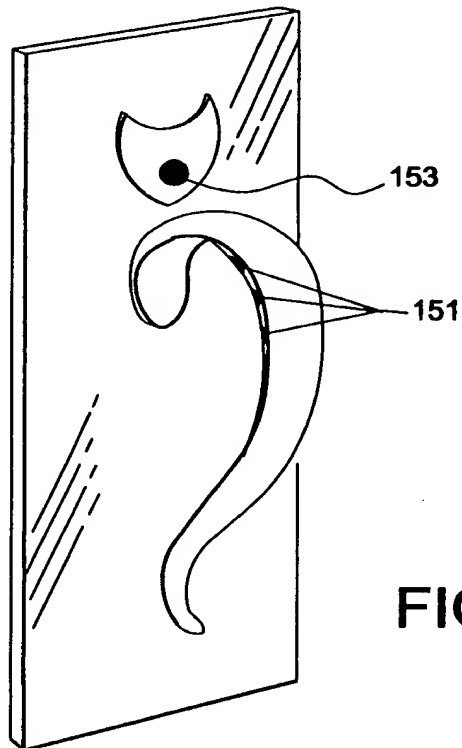
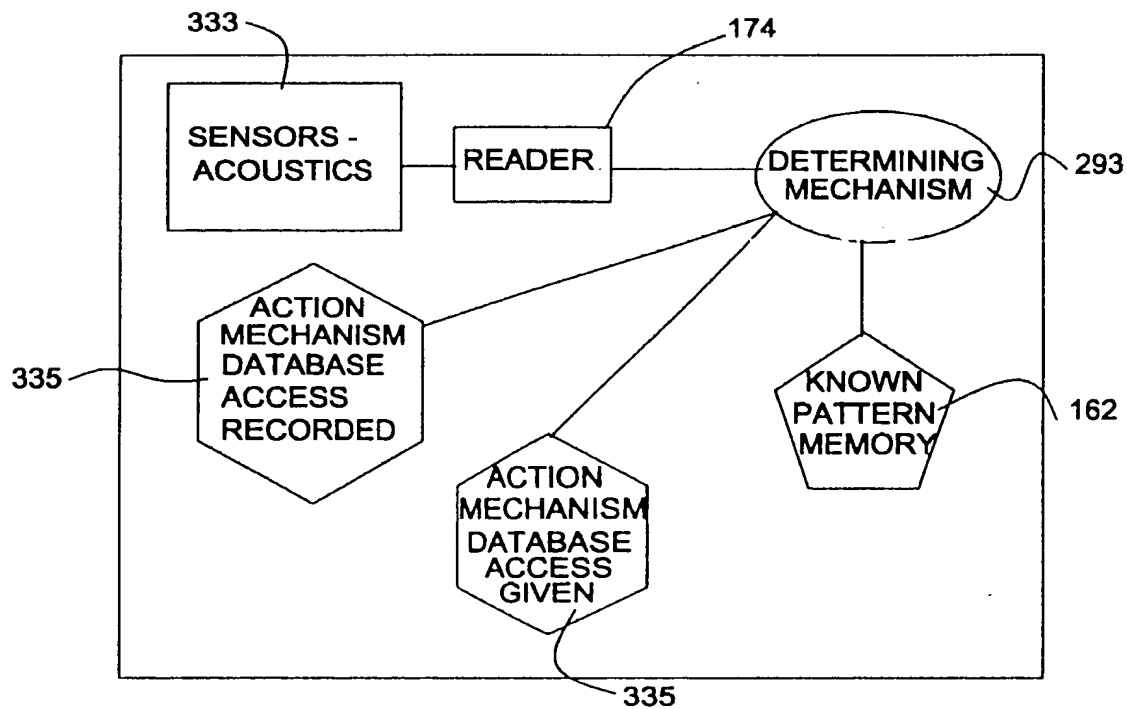


FIG.170a

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RESTRICTED DATABASE ACCESS UNIT ON SIDE OF MONITOR

FIG.171

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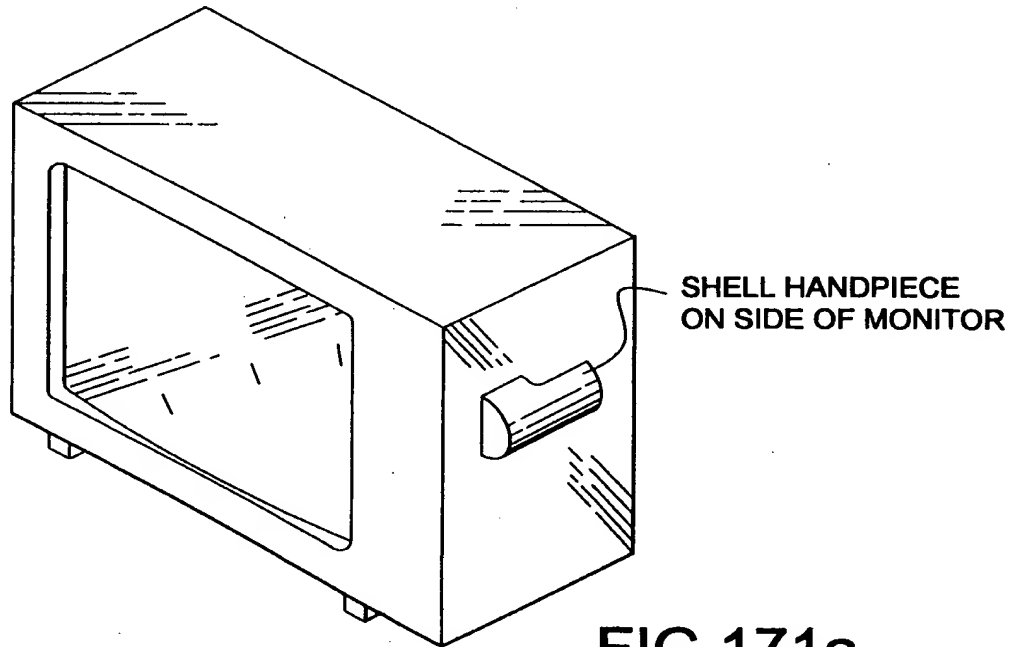


FIG. 171a

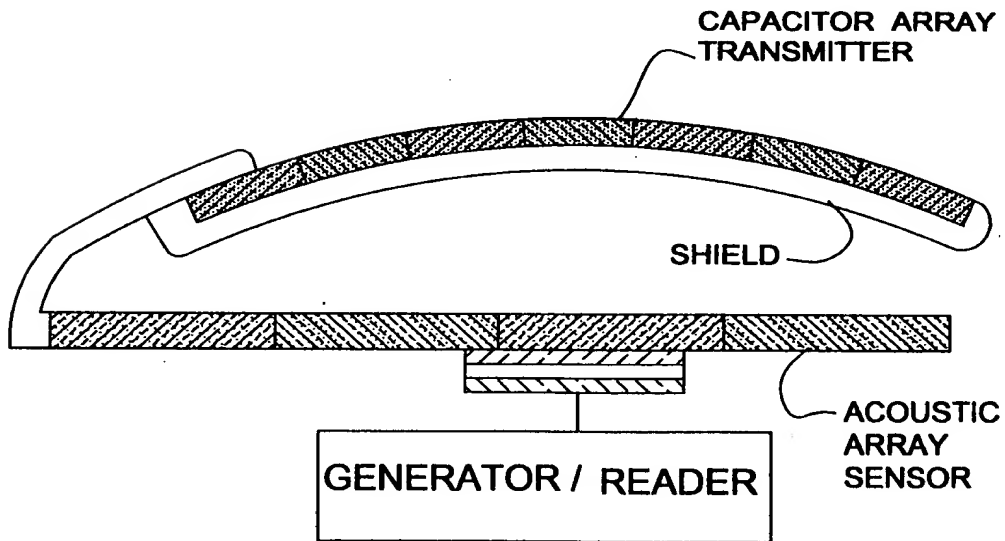


FIG. 171b

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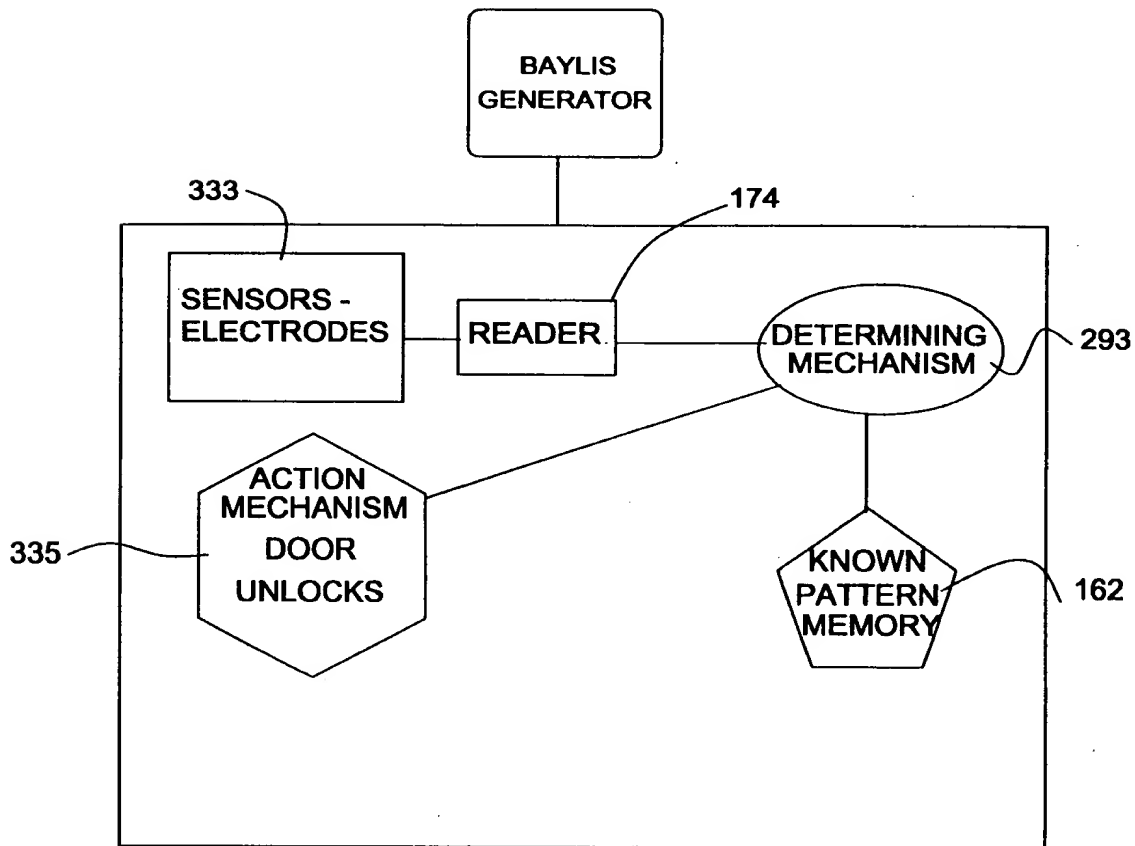


FIG.172

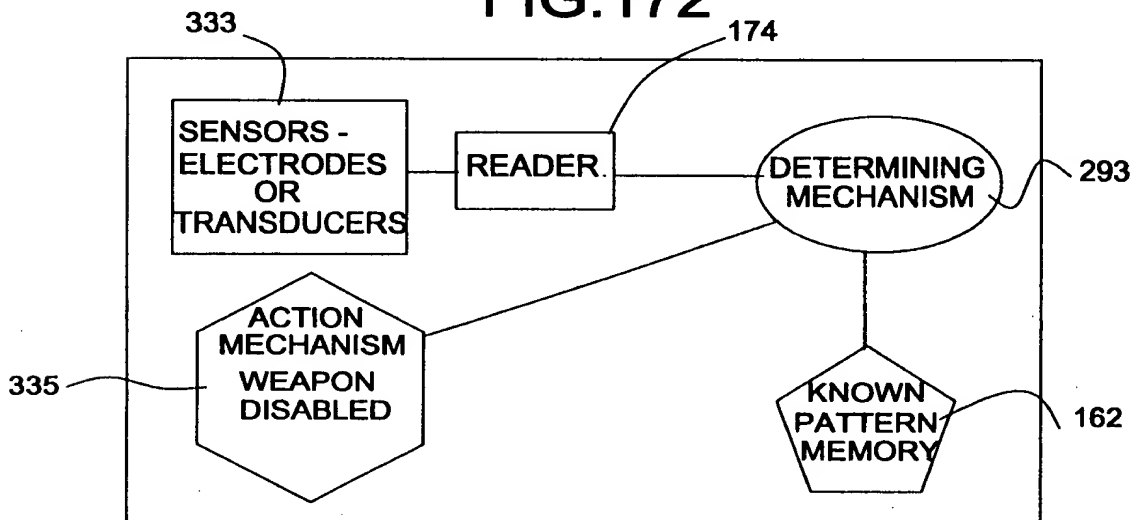


FIG.173

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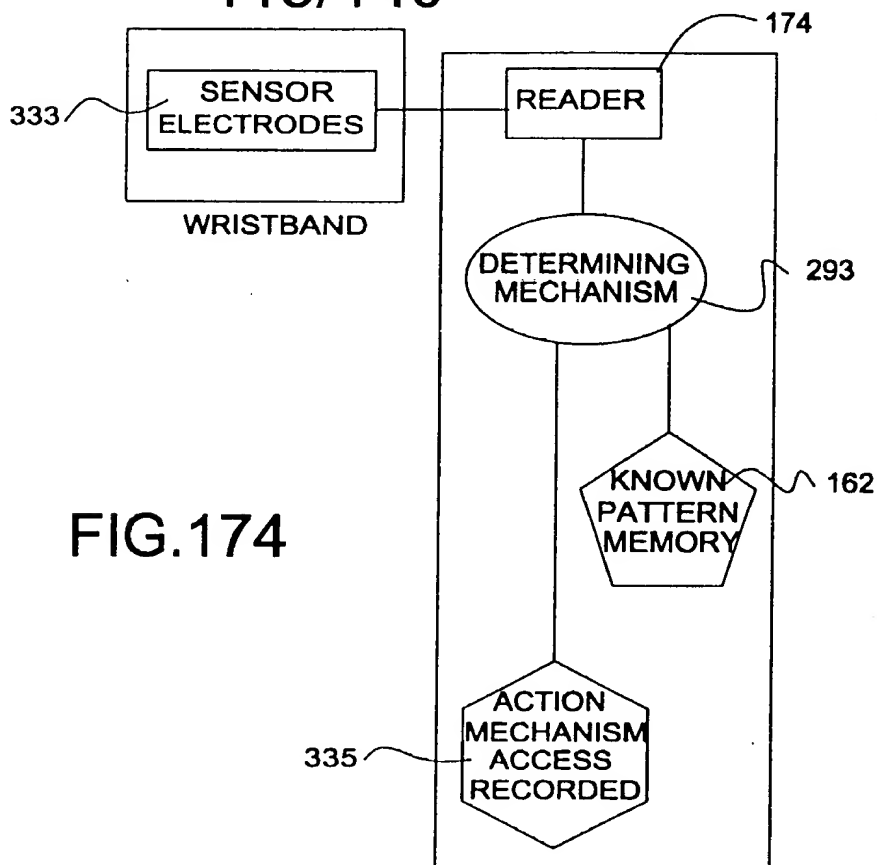
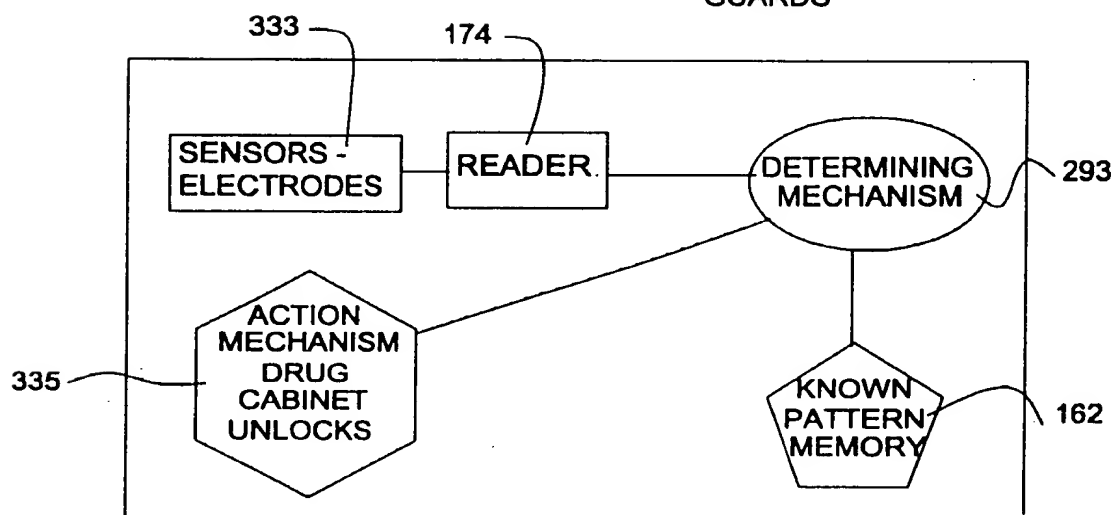


FIG.174

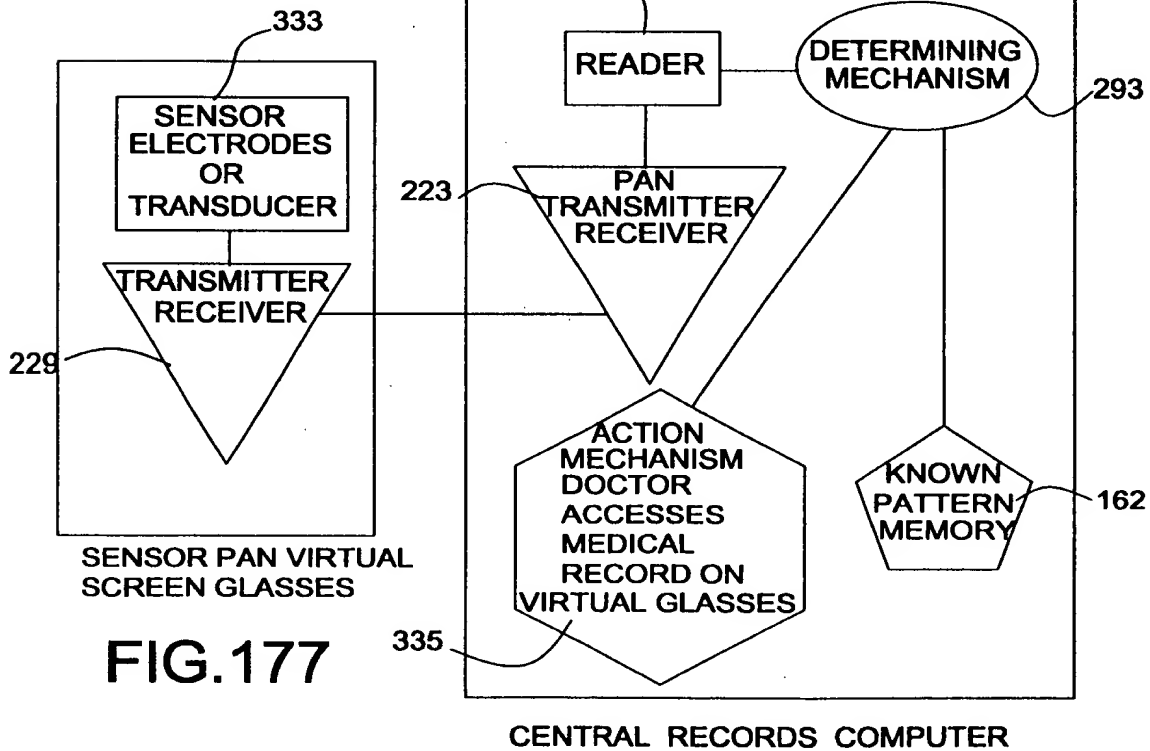
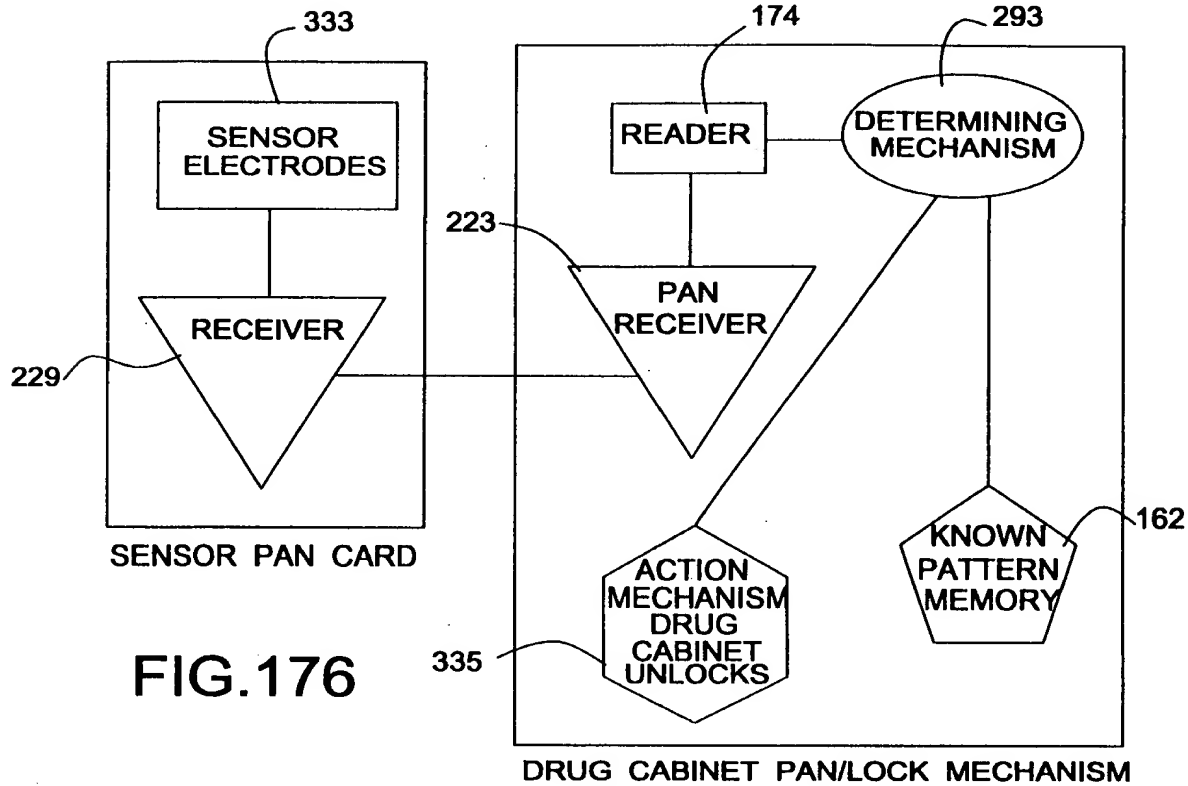
PORTABLE READER
UNIT CARRIED BY
GUARDS



DRUG CABINET HANDPIECE / LOCK MECHANISM

FIG.175

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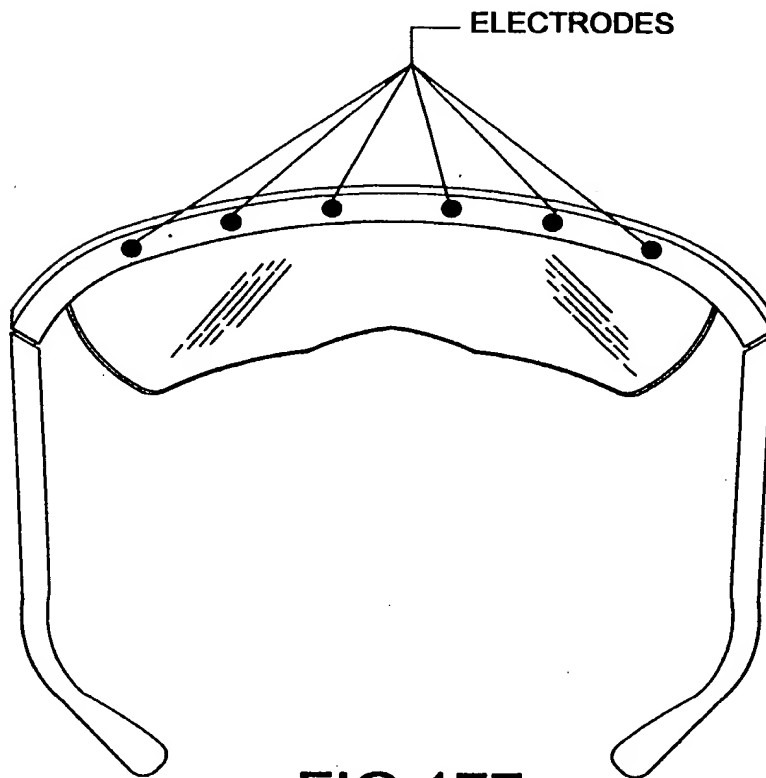


FIG.177a

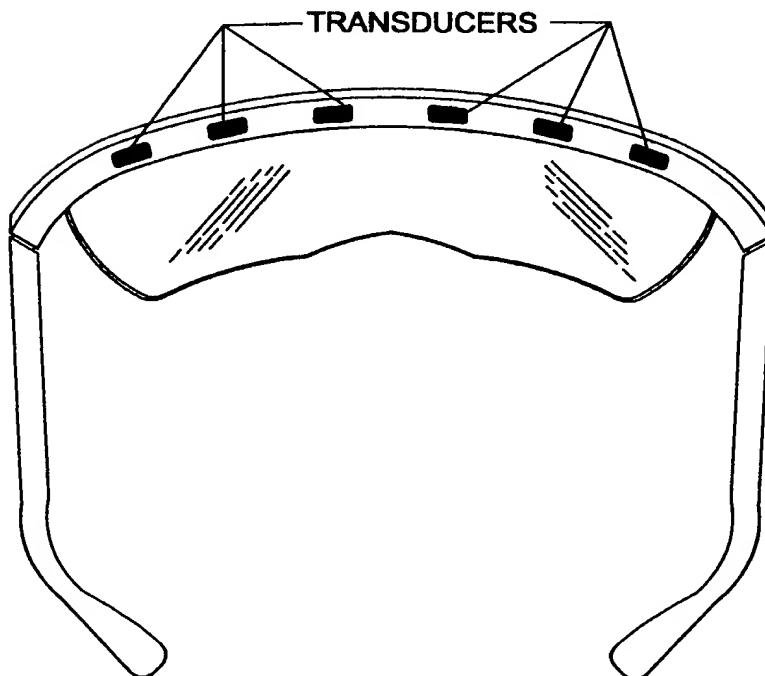
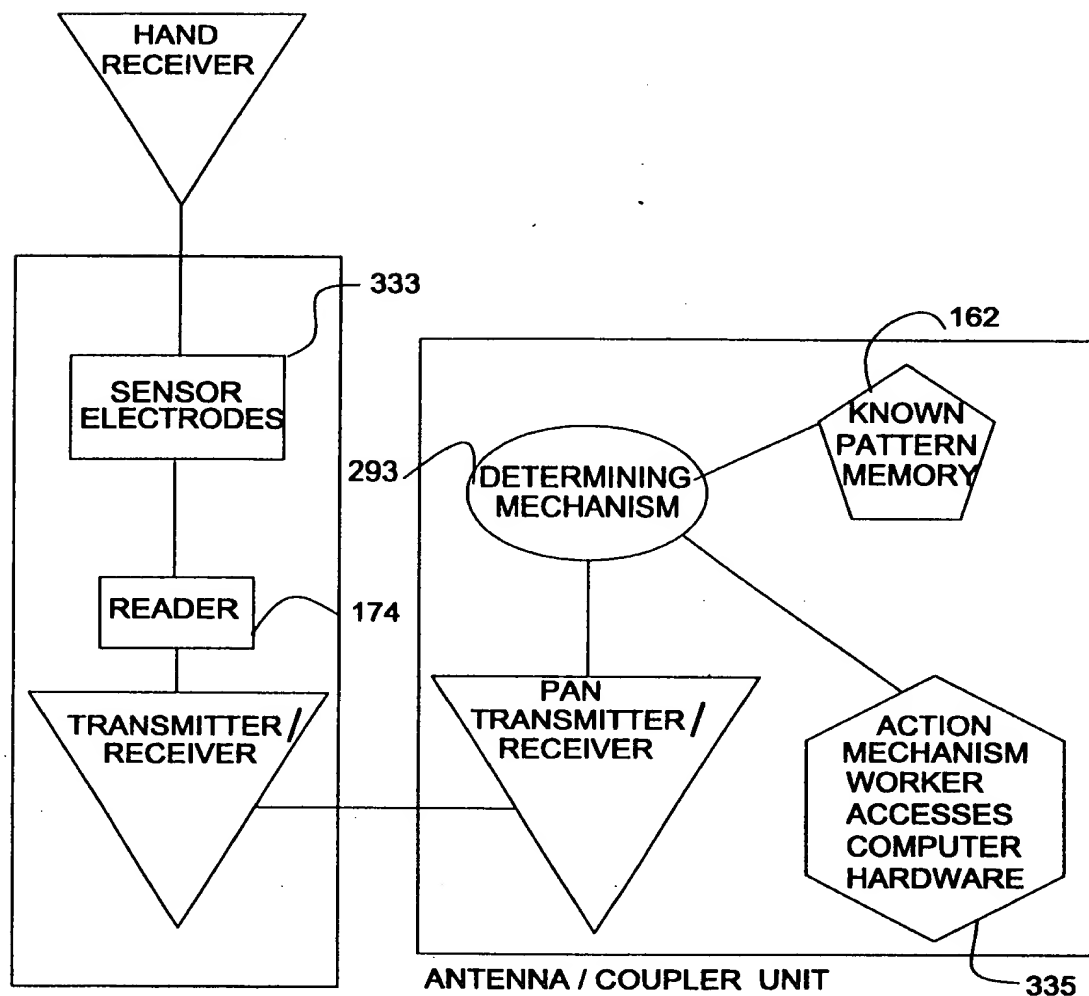


FIG.177b

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CONTACTLESS
ELECTRODE
SMART CARD

FIG.178

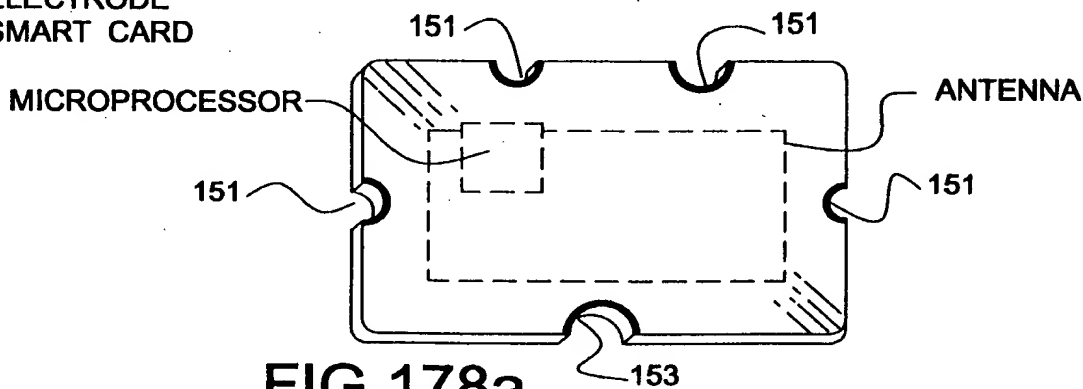


FIG.178a

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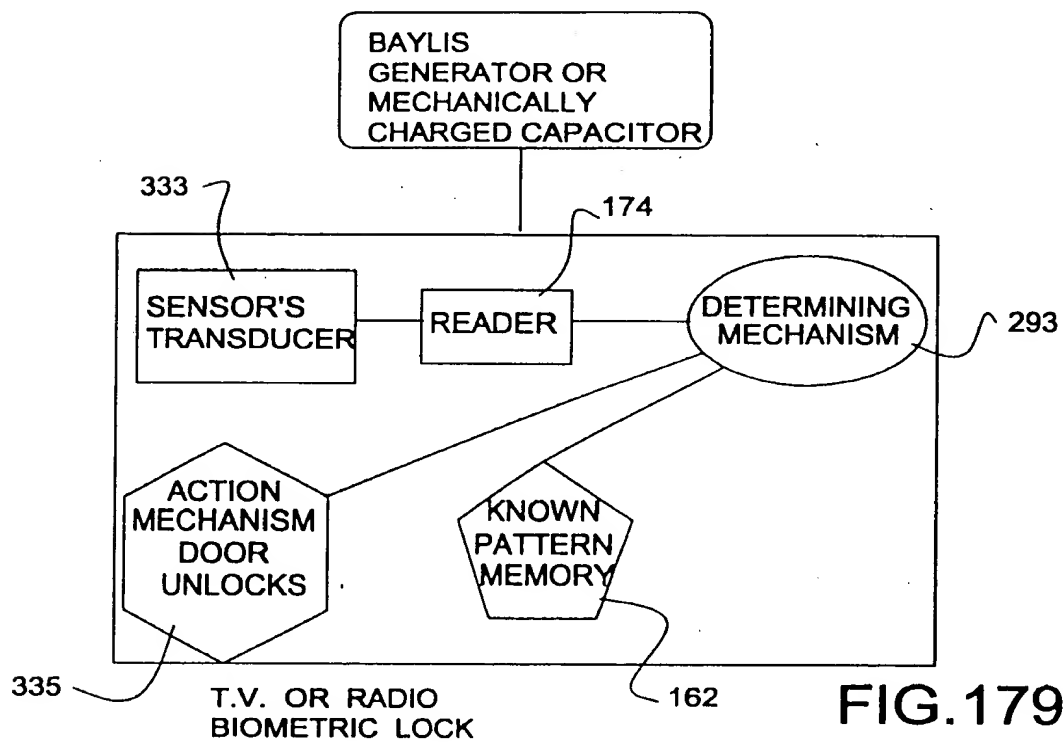


FIG. 179

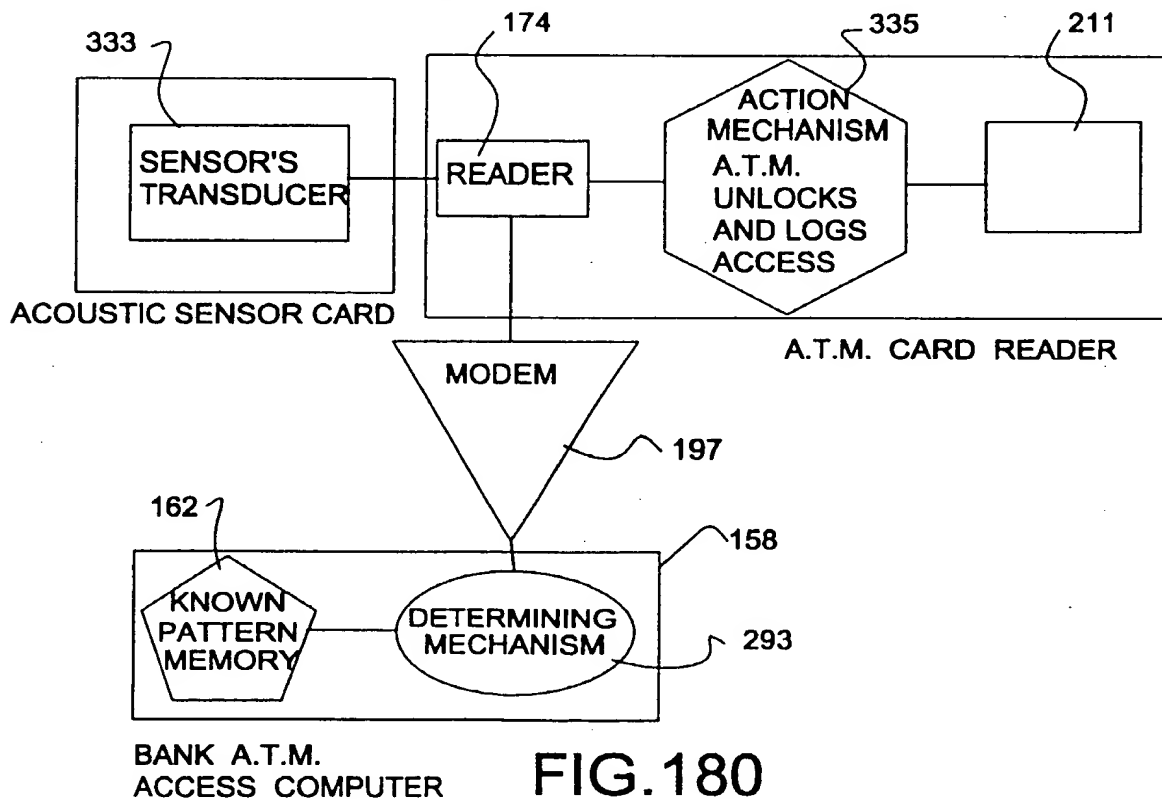


FIG. 180

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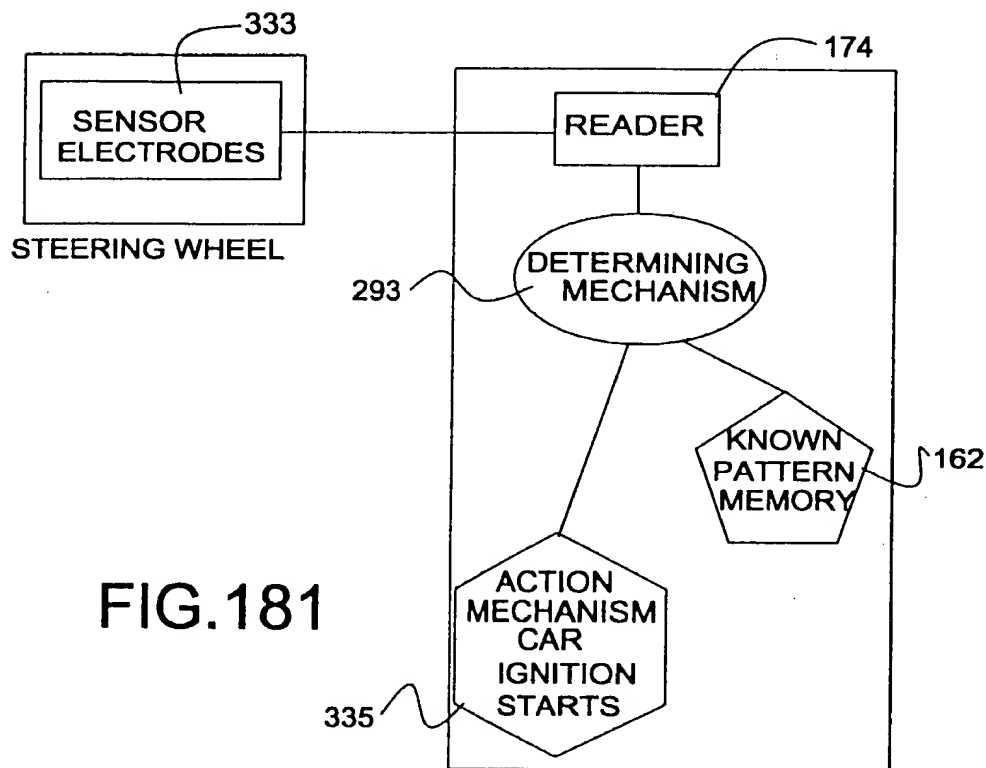


FIG. 181

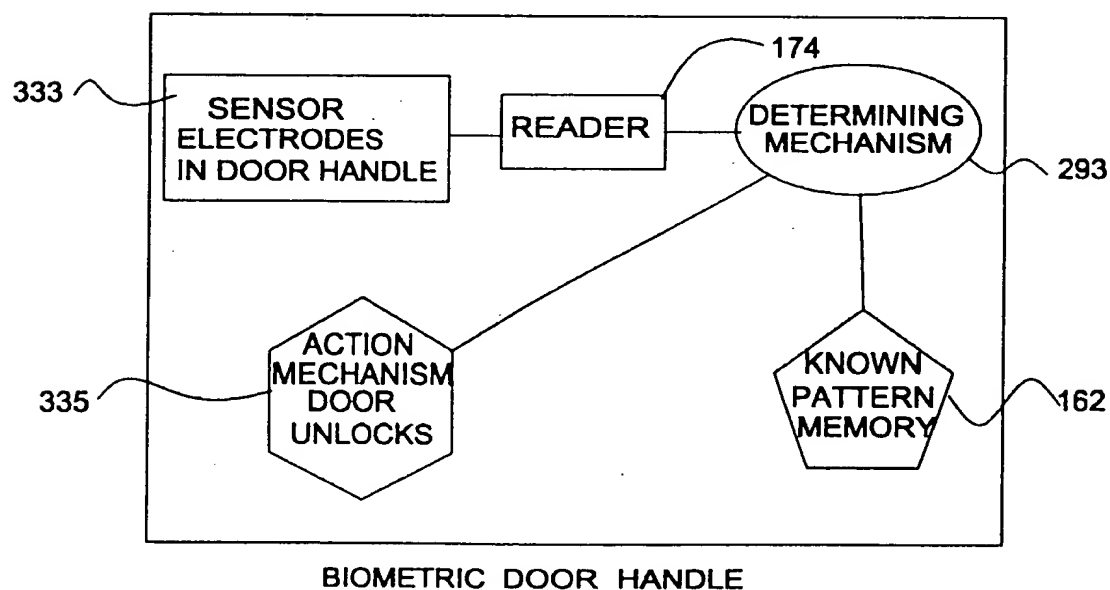


FIG. 182

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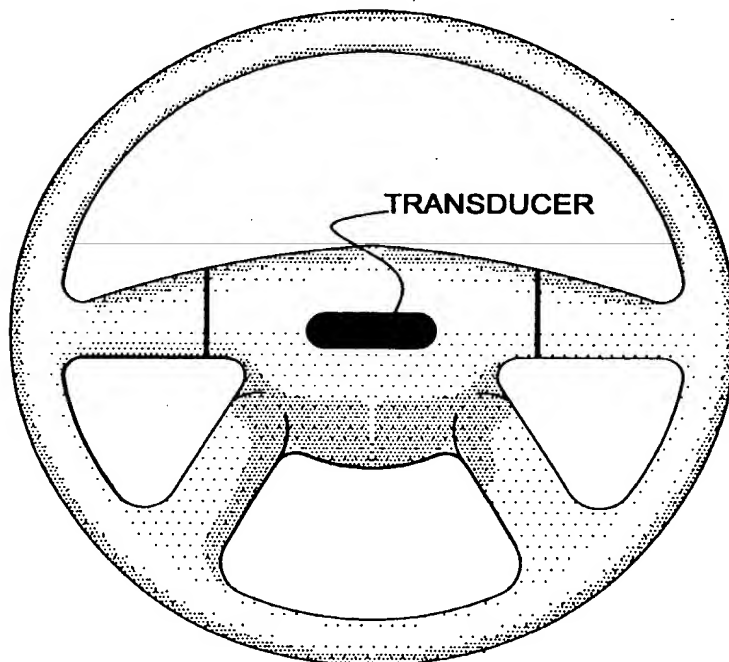


FIG. 182a

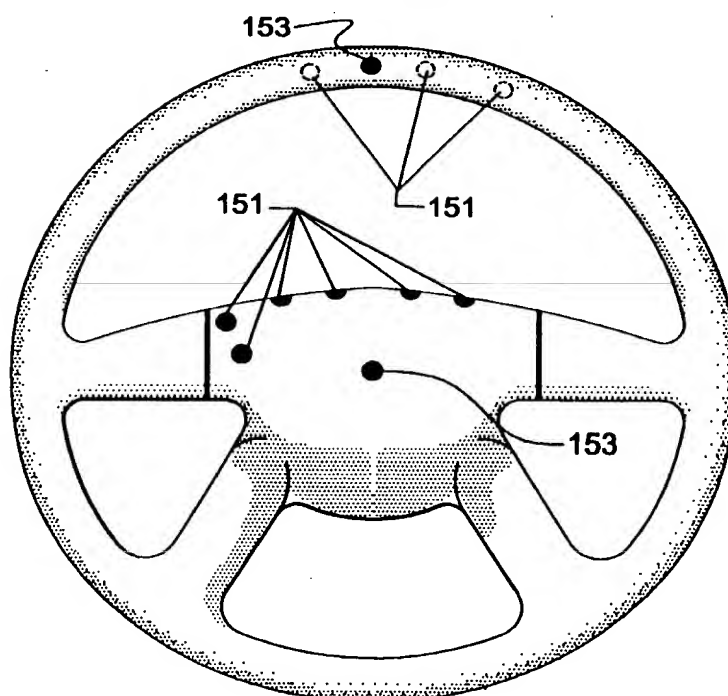


FIG. 182b

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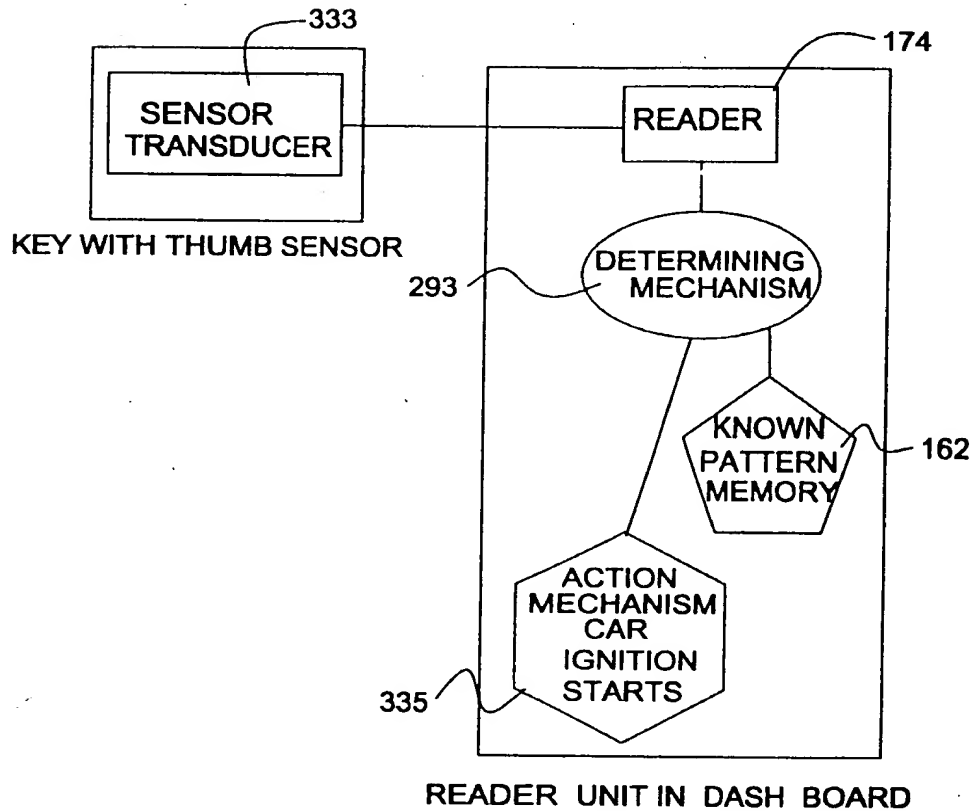


FIG.183

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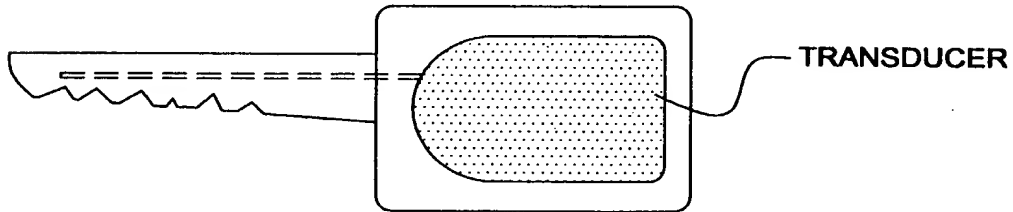


FIG. 183a

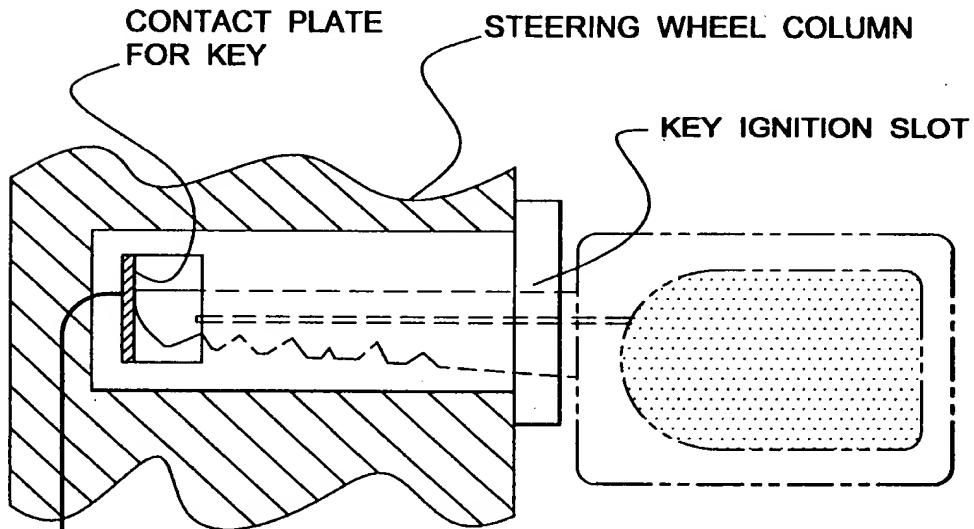
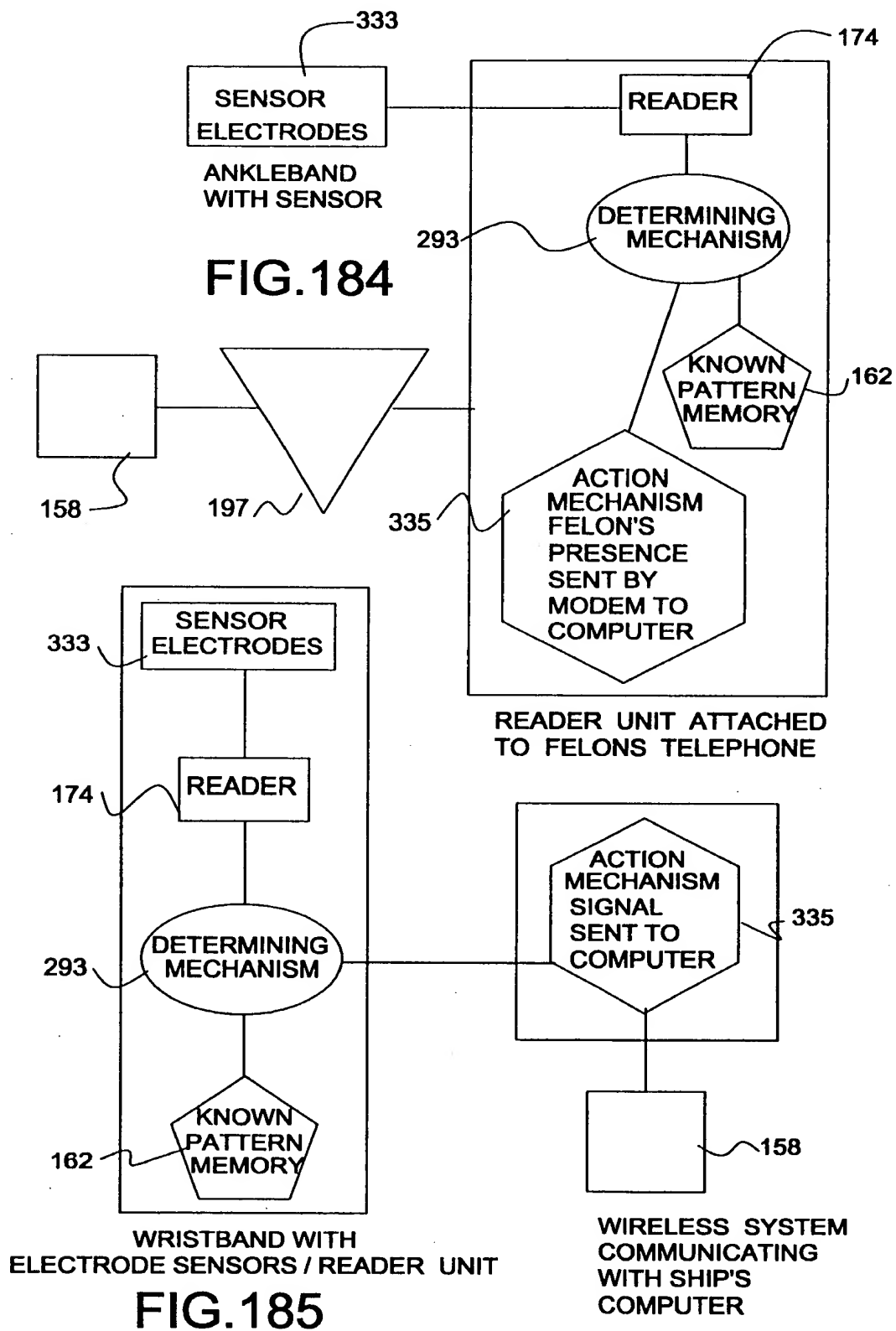


FIG. 183b

GENERATOR / READER
DETERMINING MECHANISM

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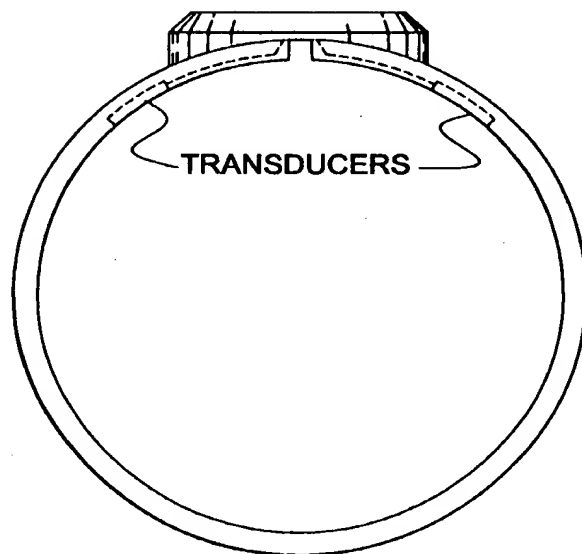


FIG. 185a

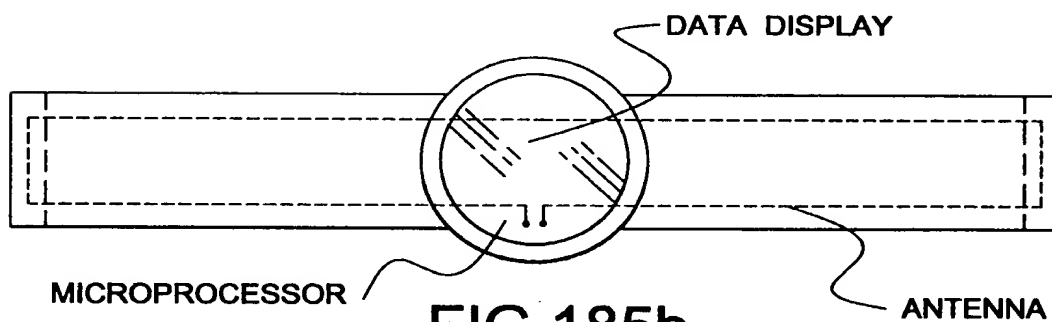
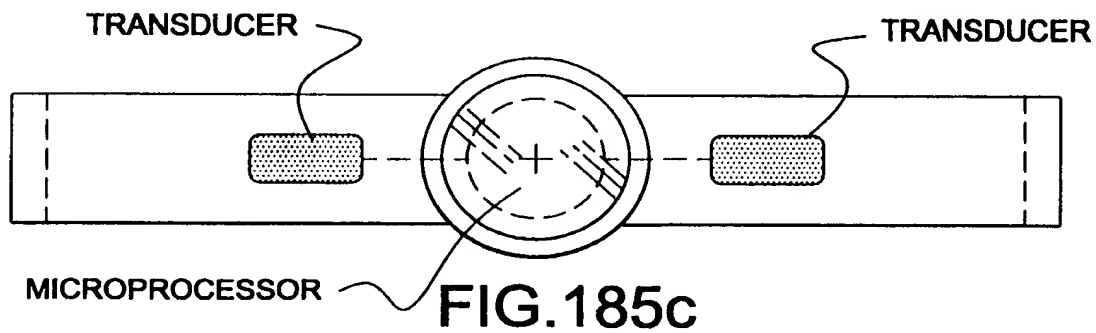


FIG. 185b



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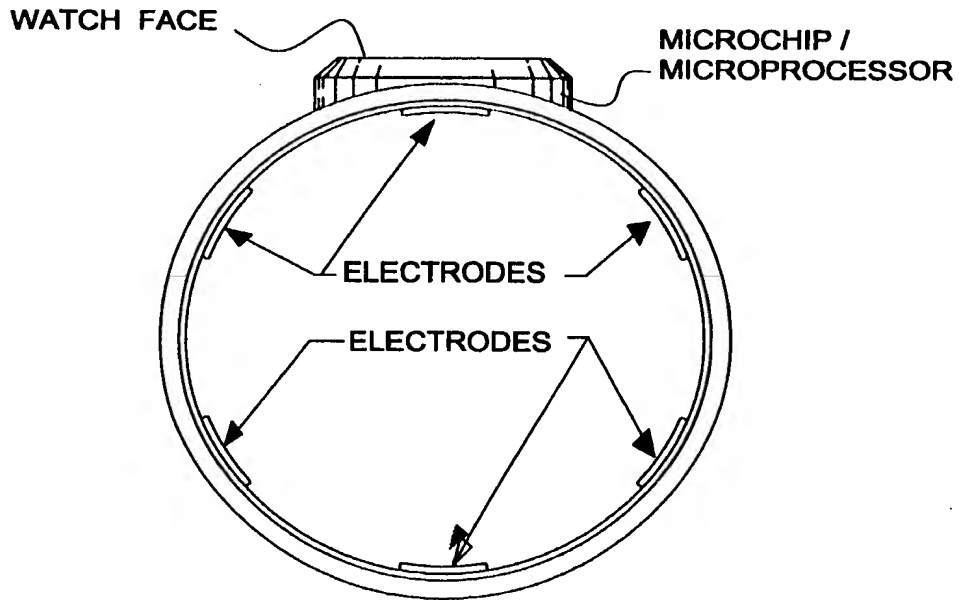


FIG. 185d

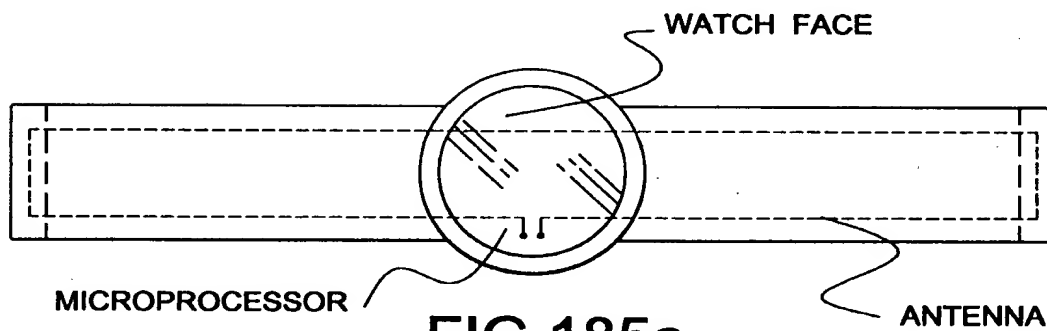


FIG. 185e

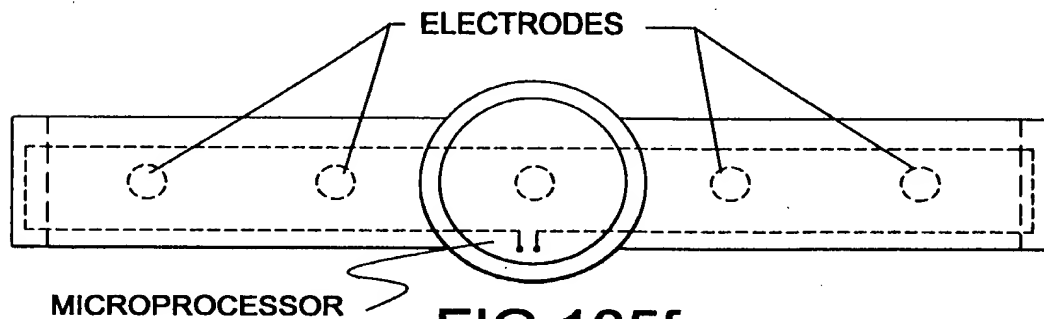


FIG. 185f

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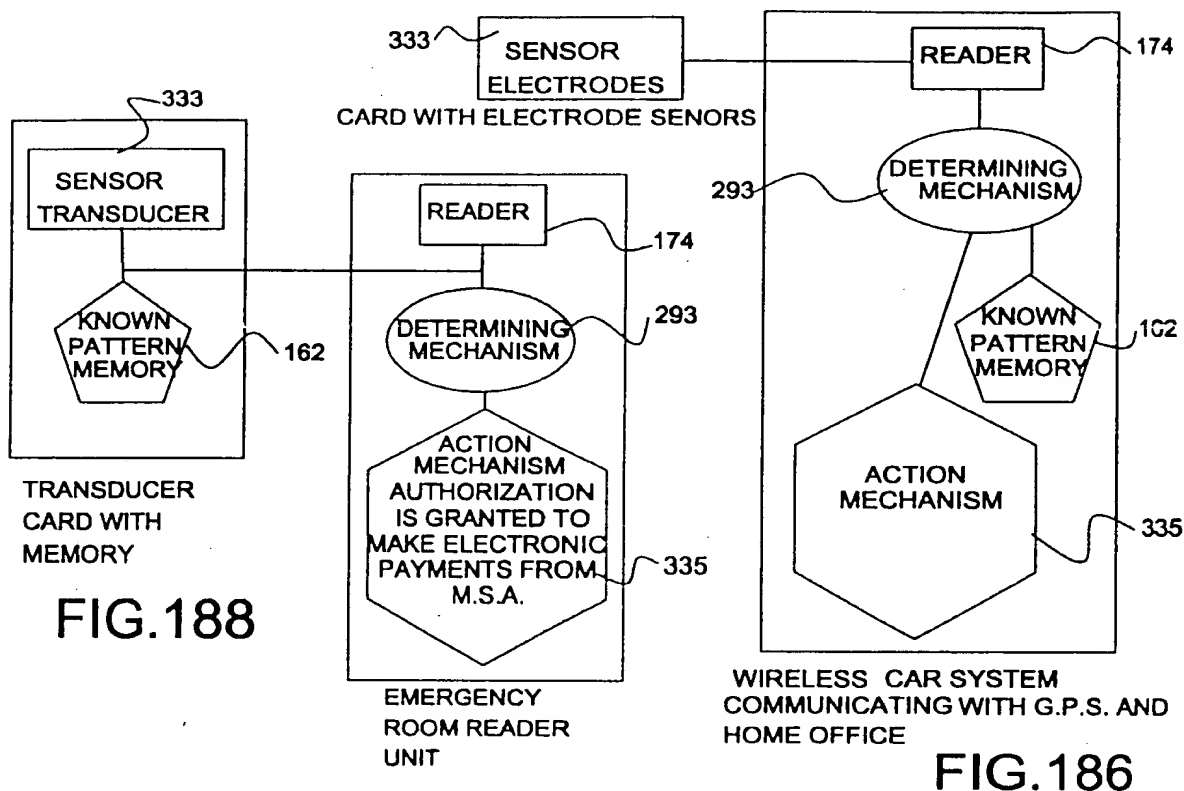


FIG. 187

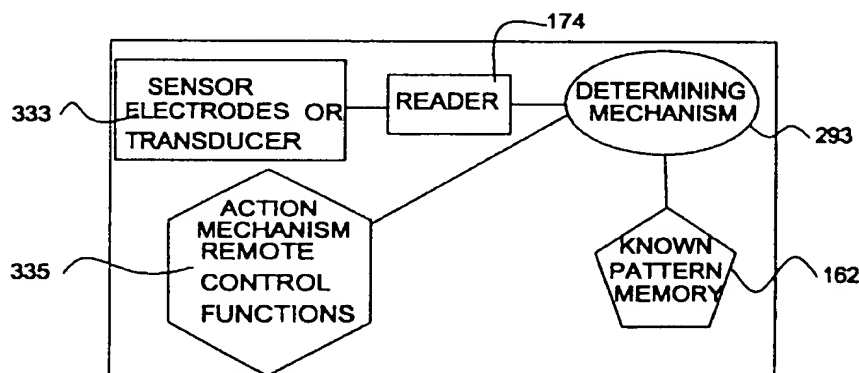
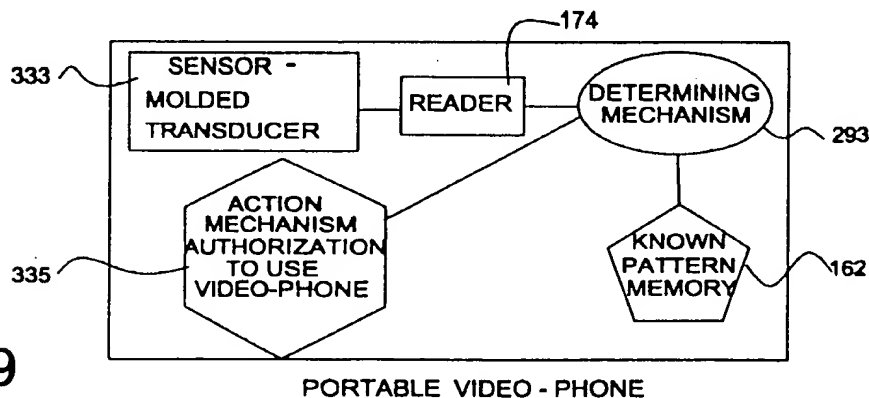


FIG. 189



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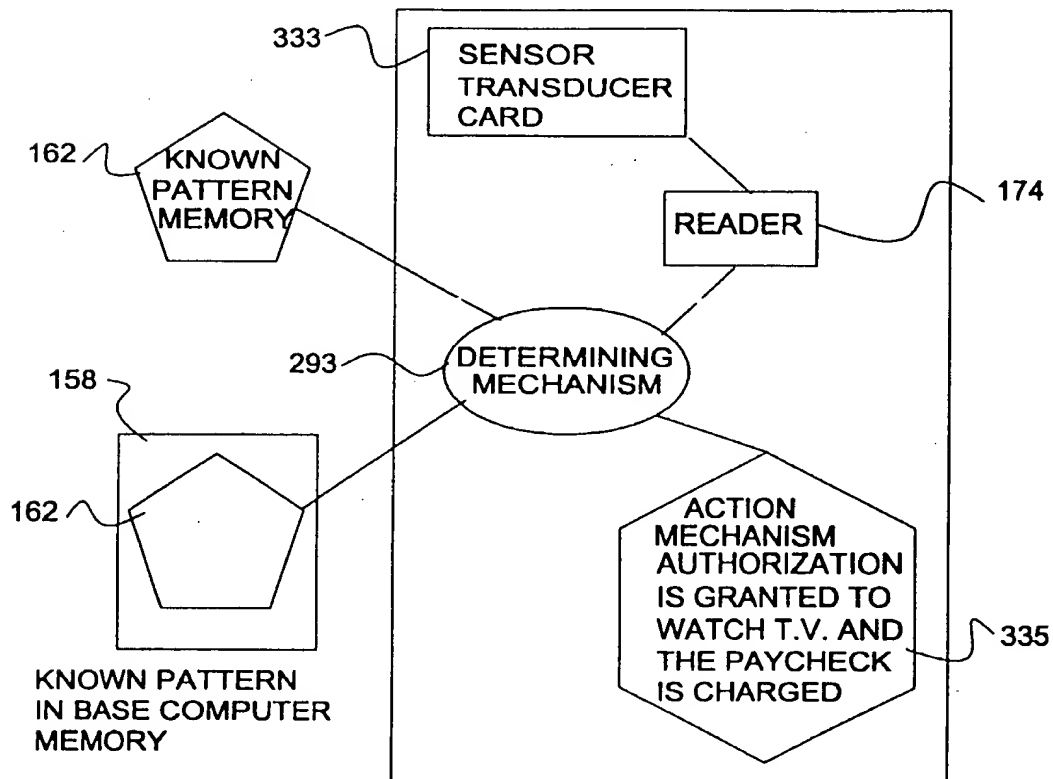


FIG.190

PAY T.V. READER UNIT

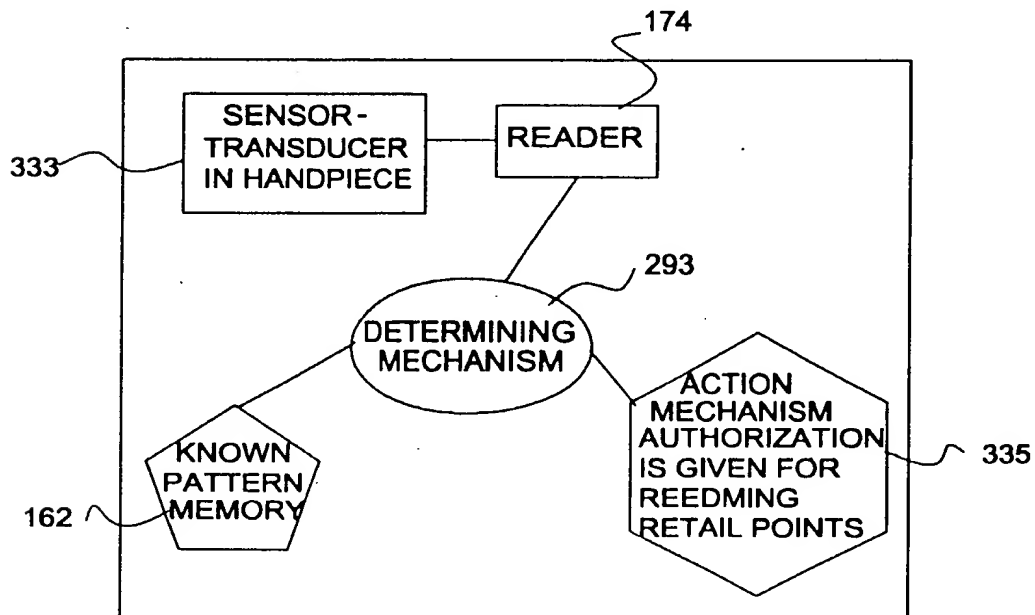


FIG.191

ACOUSTIC HANDPIECE
AT CASH REGISTER

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FIG.192

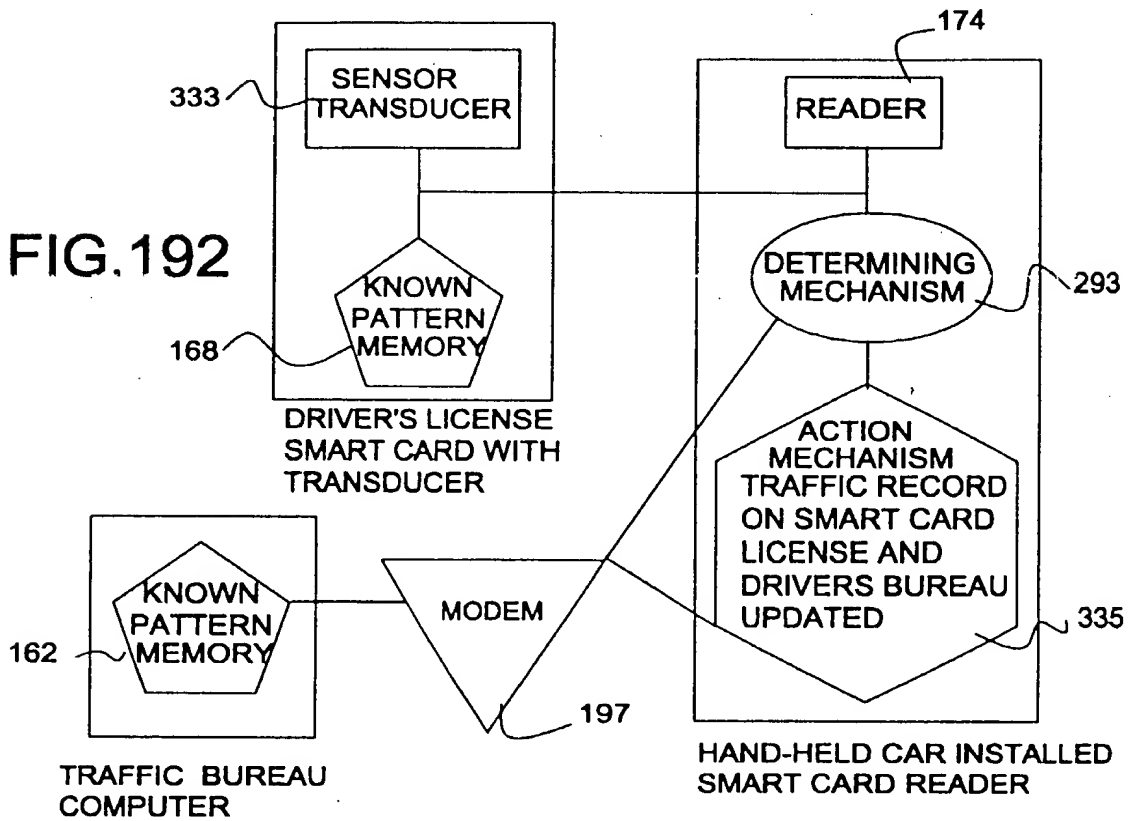
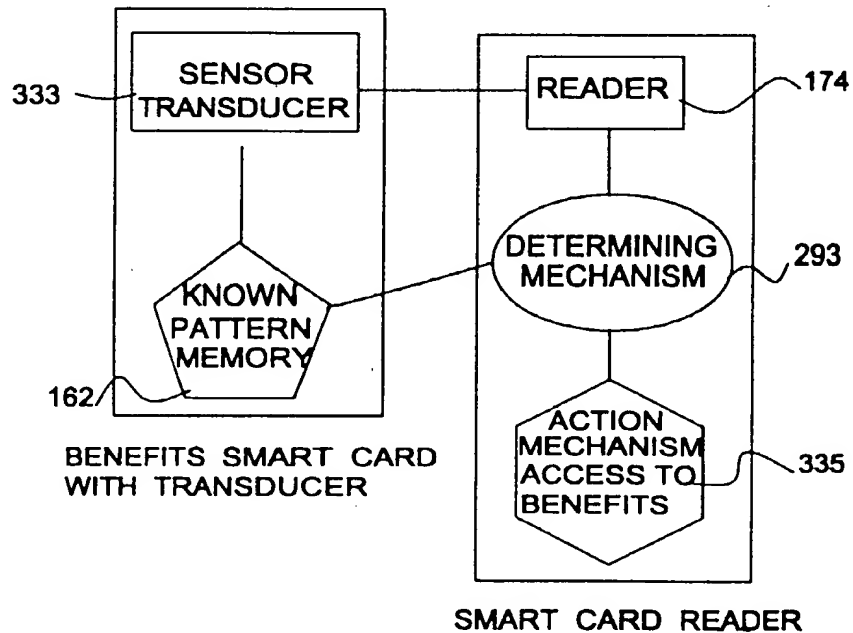
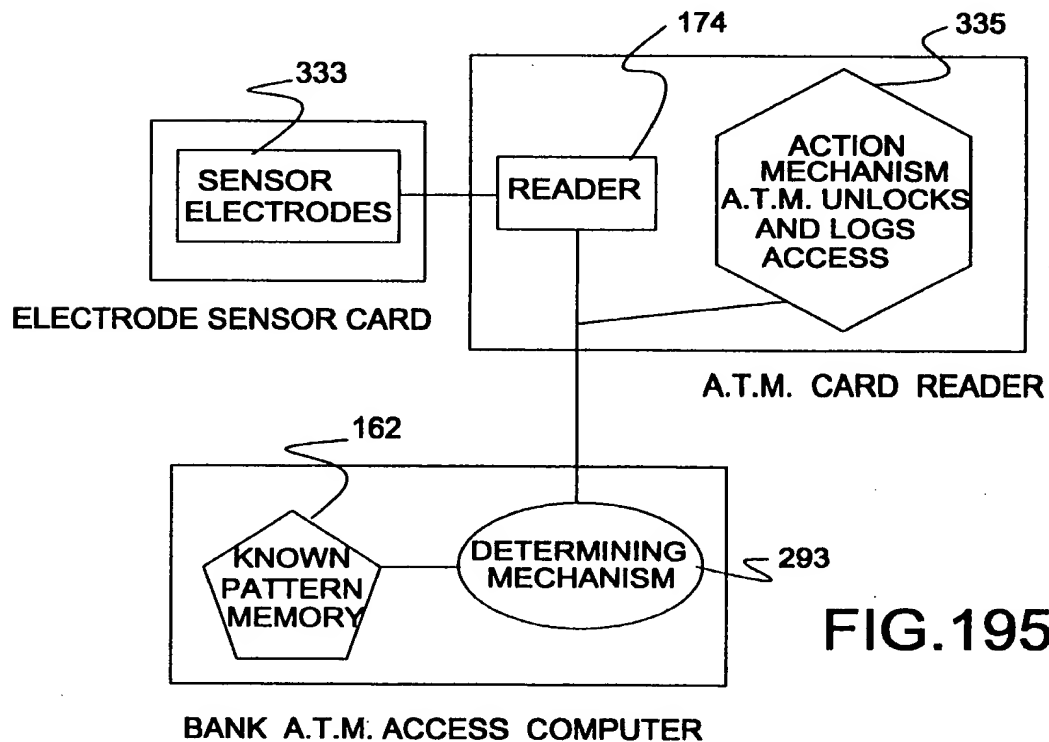
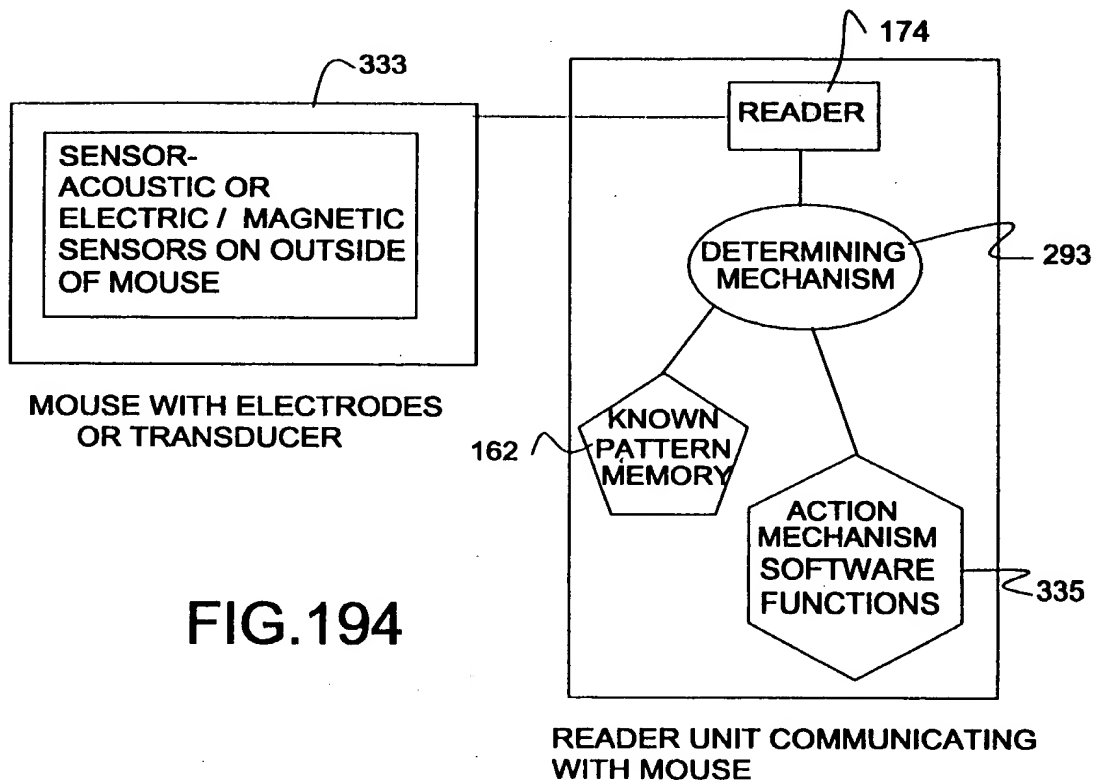


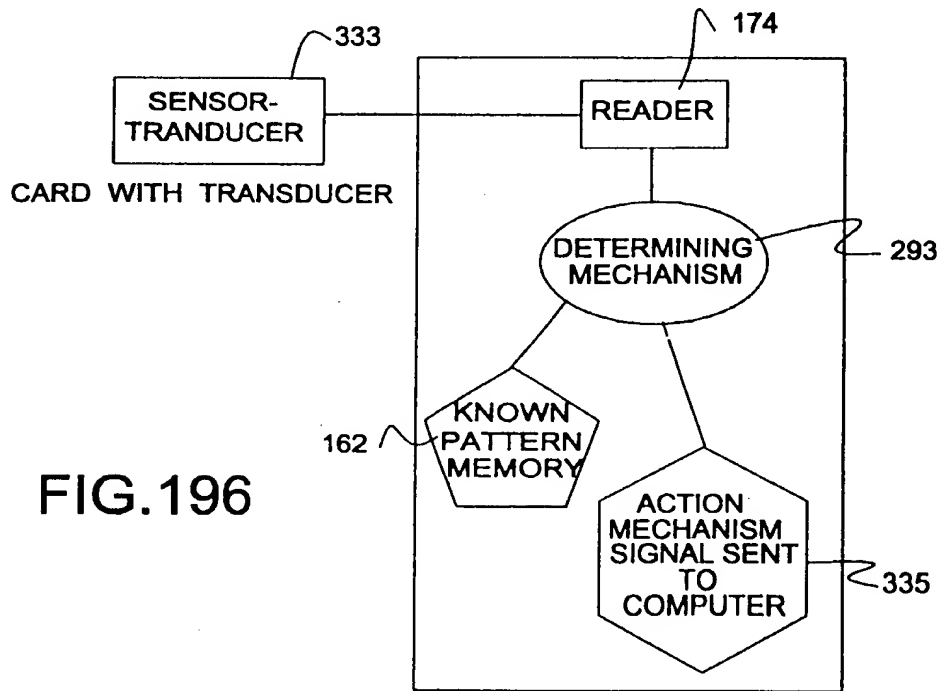
FIG.193



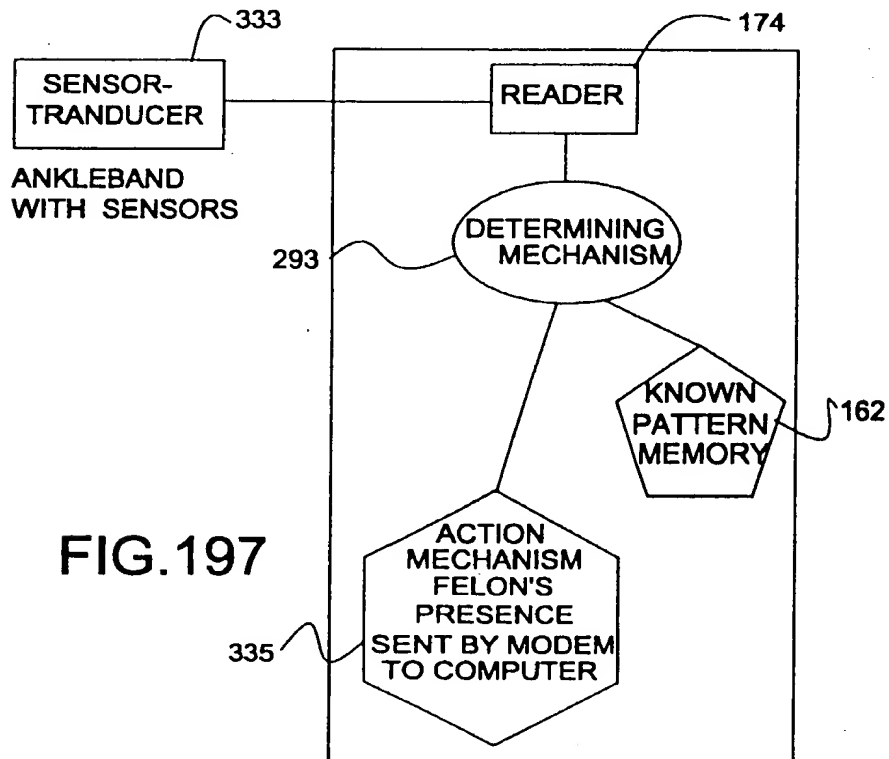
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WIRELESS CAR SYSTEM COMMUNICATING
WITH G.P.S. AND HOME OFFICE



READER UNIT ATTACHED TO FELON'S TELEPHONE

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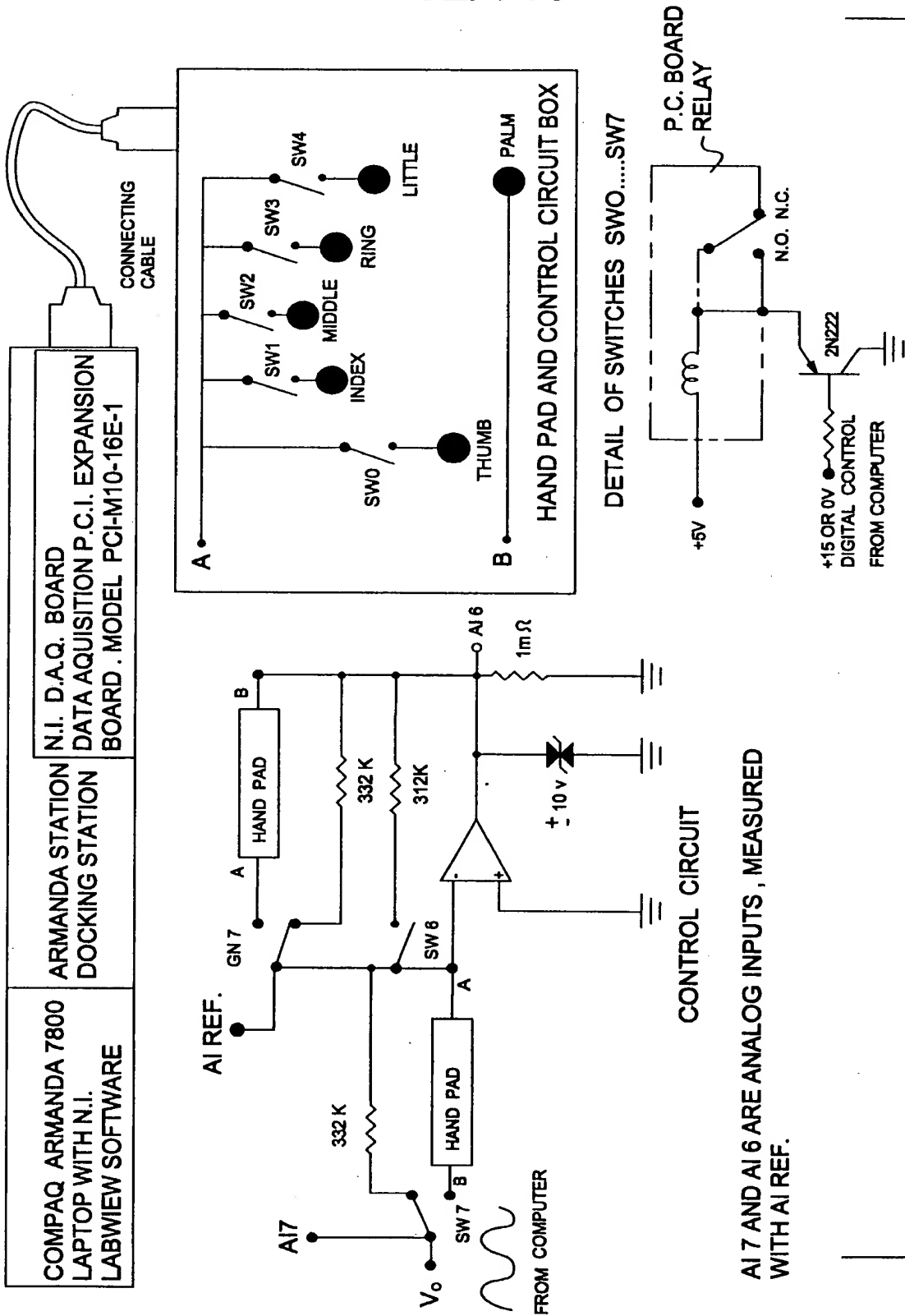
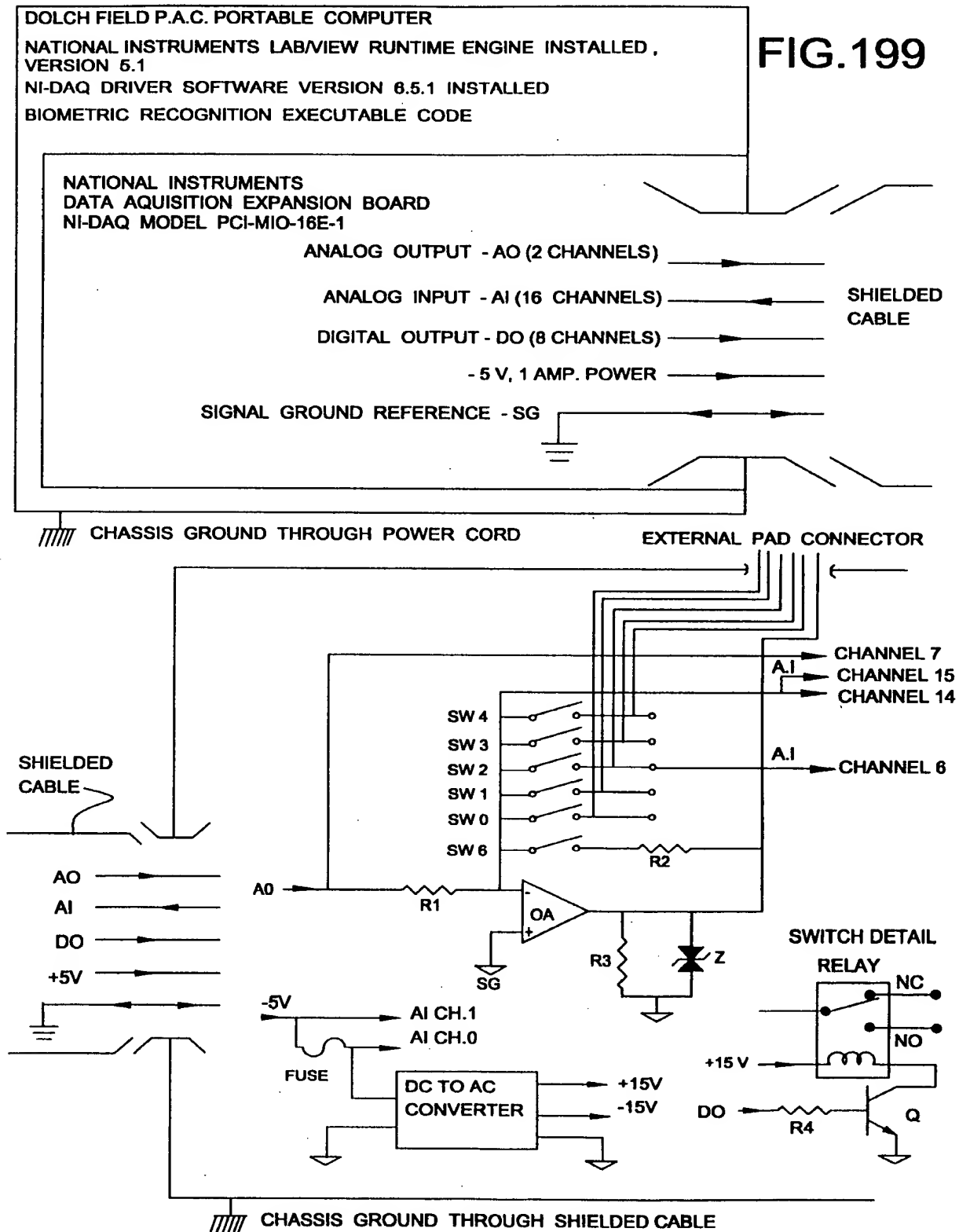


FIG.198

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FIG.199



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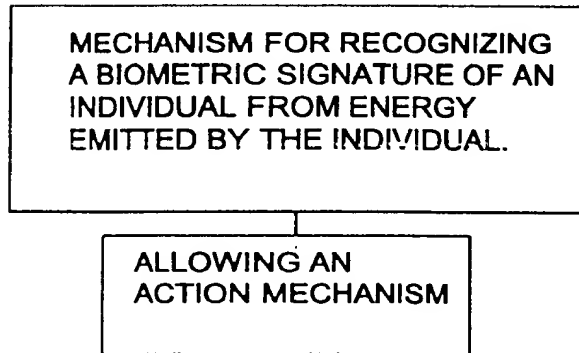


FIG.200

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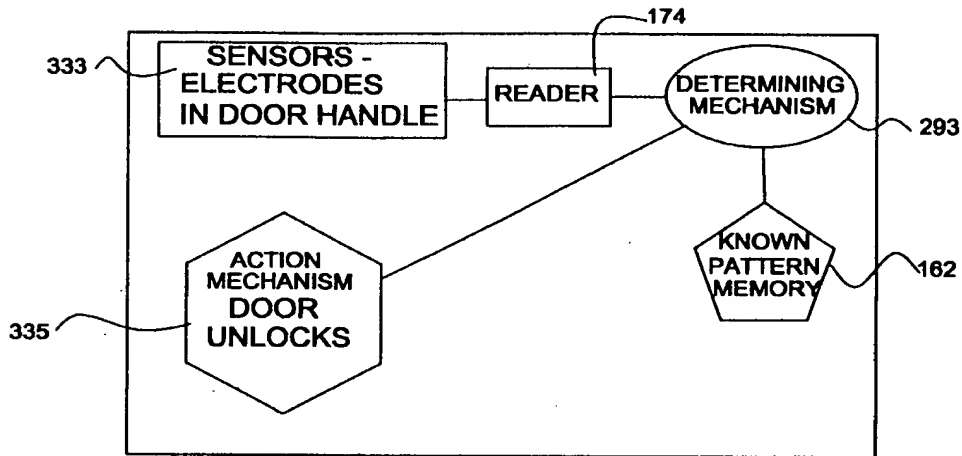


FIG.201

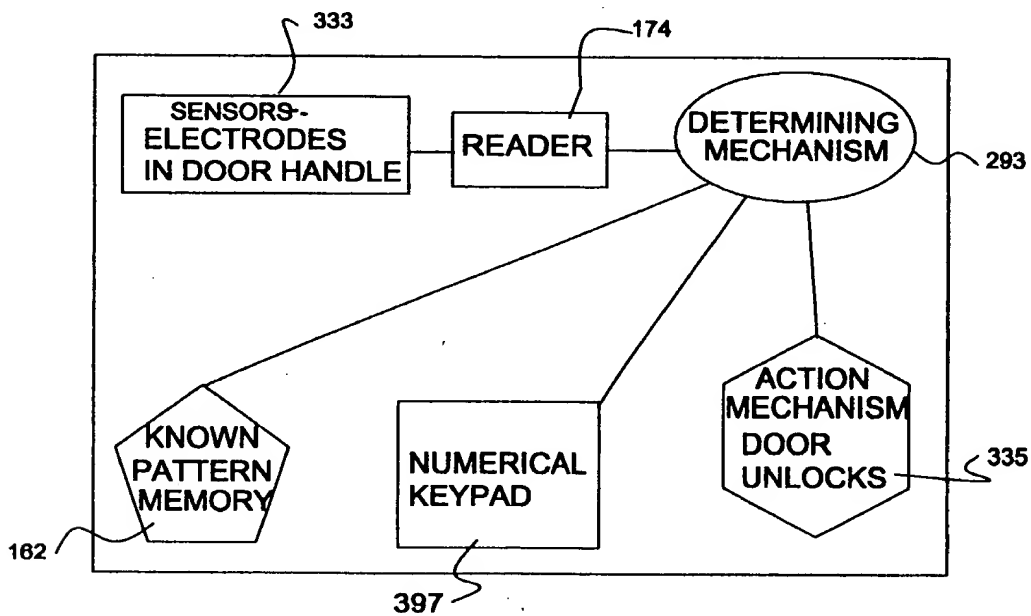


FIG.202

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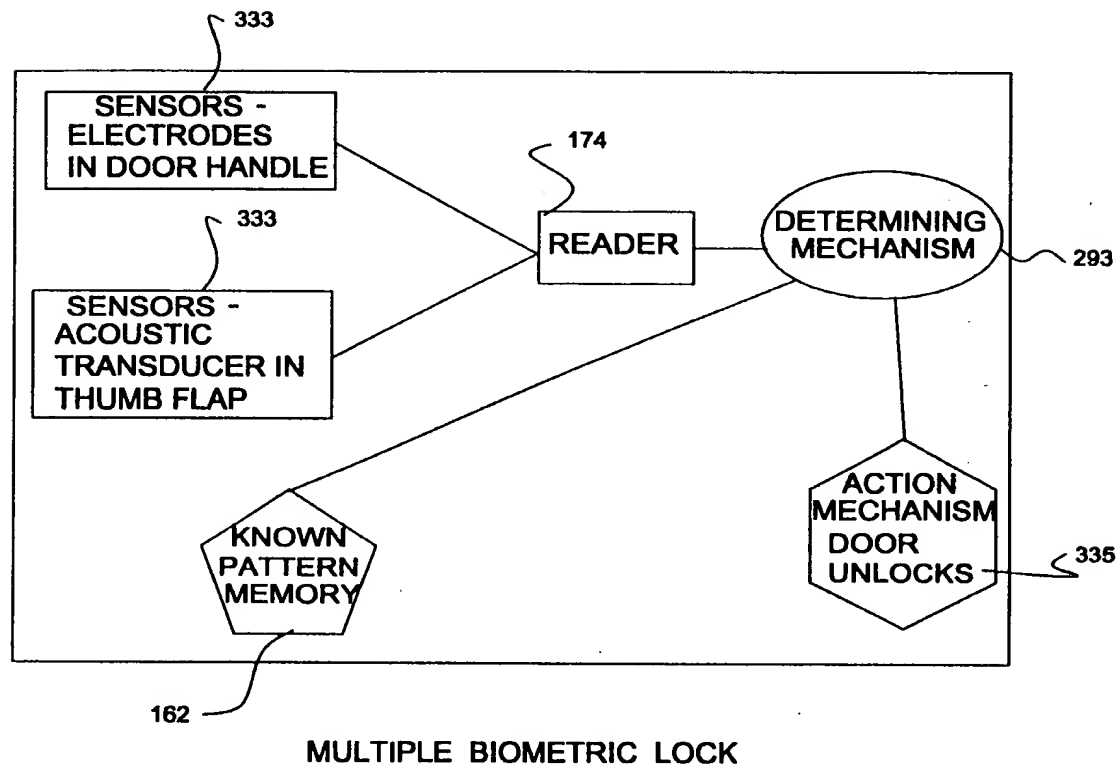


FIG.203

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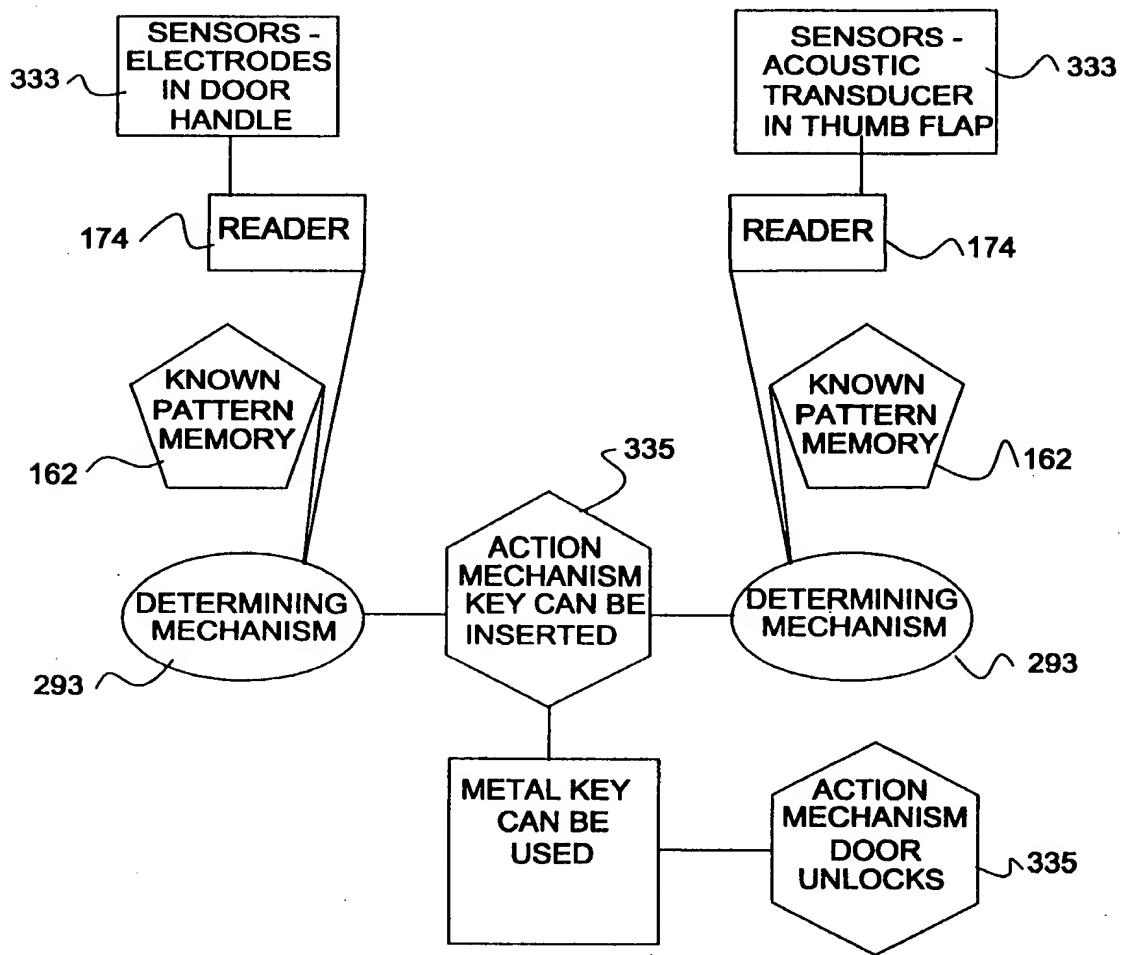
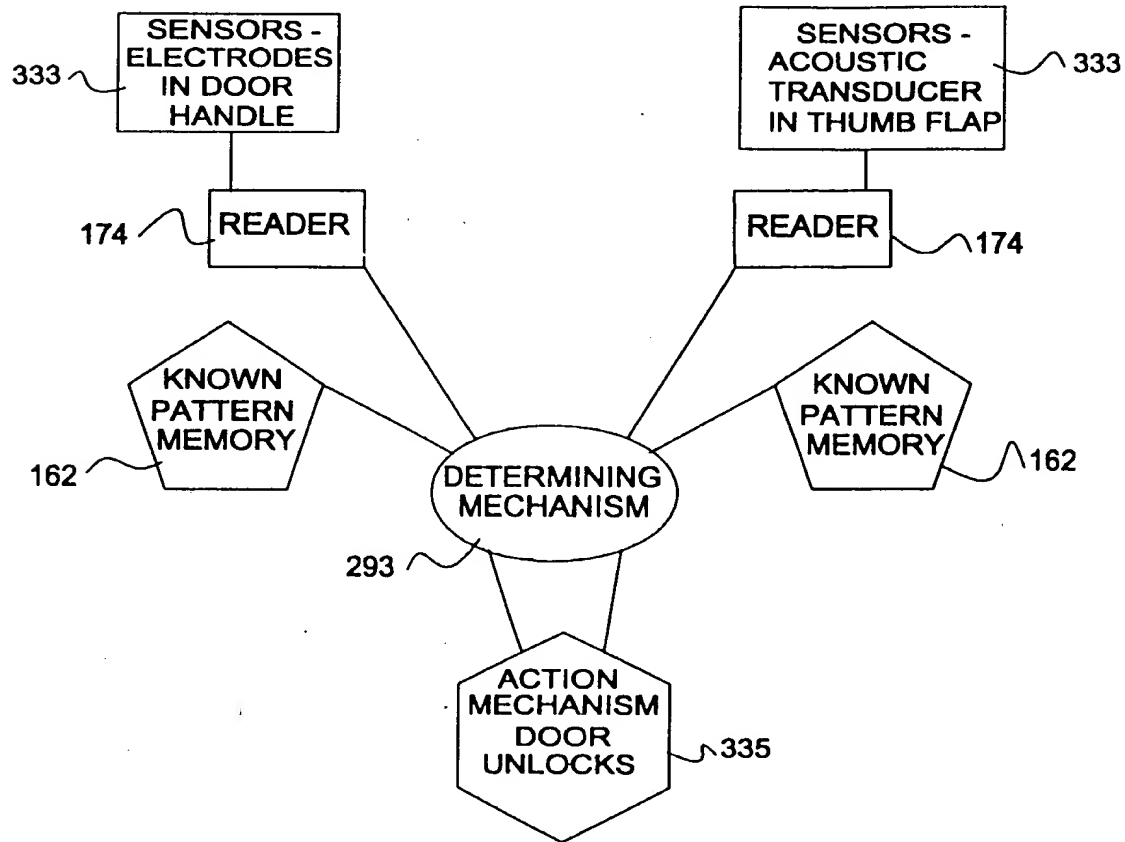


FIG.204

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OPTIONAL MULTIPLE BIOMETRIC LOCK

FIG.205

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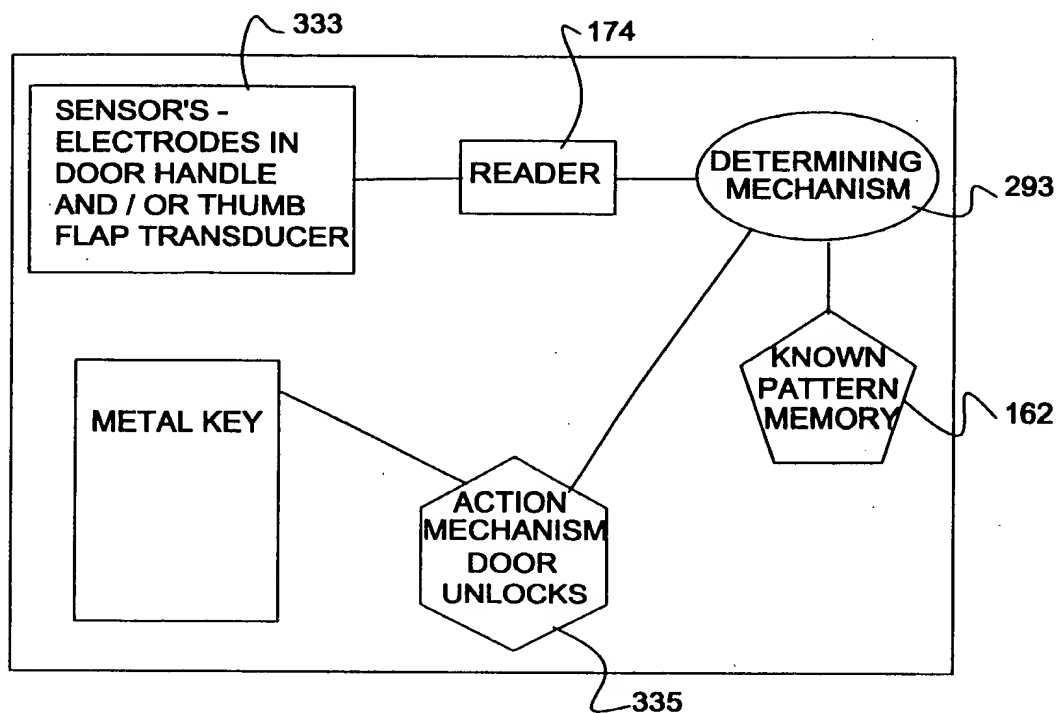


FIG.206

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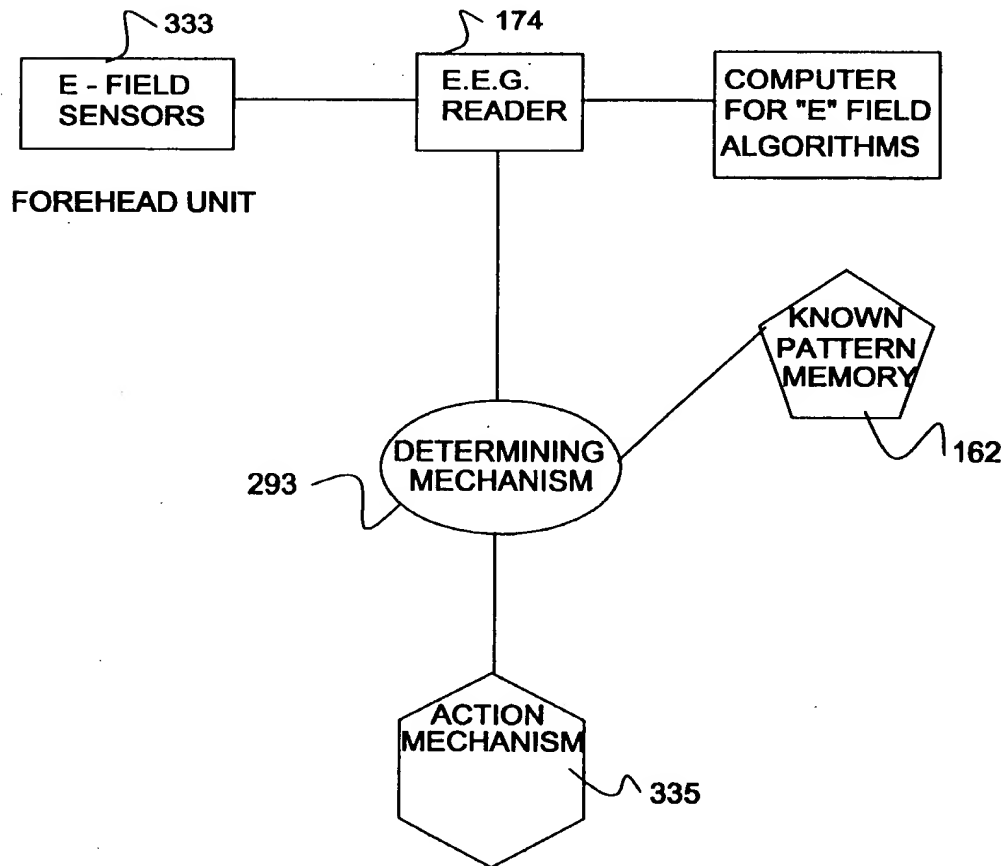


FIG.207